

GRAIN & FEED JOURNALS

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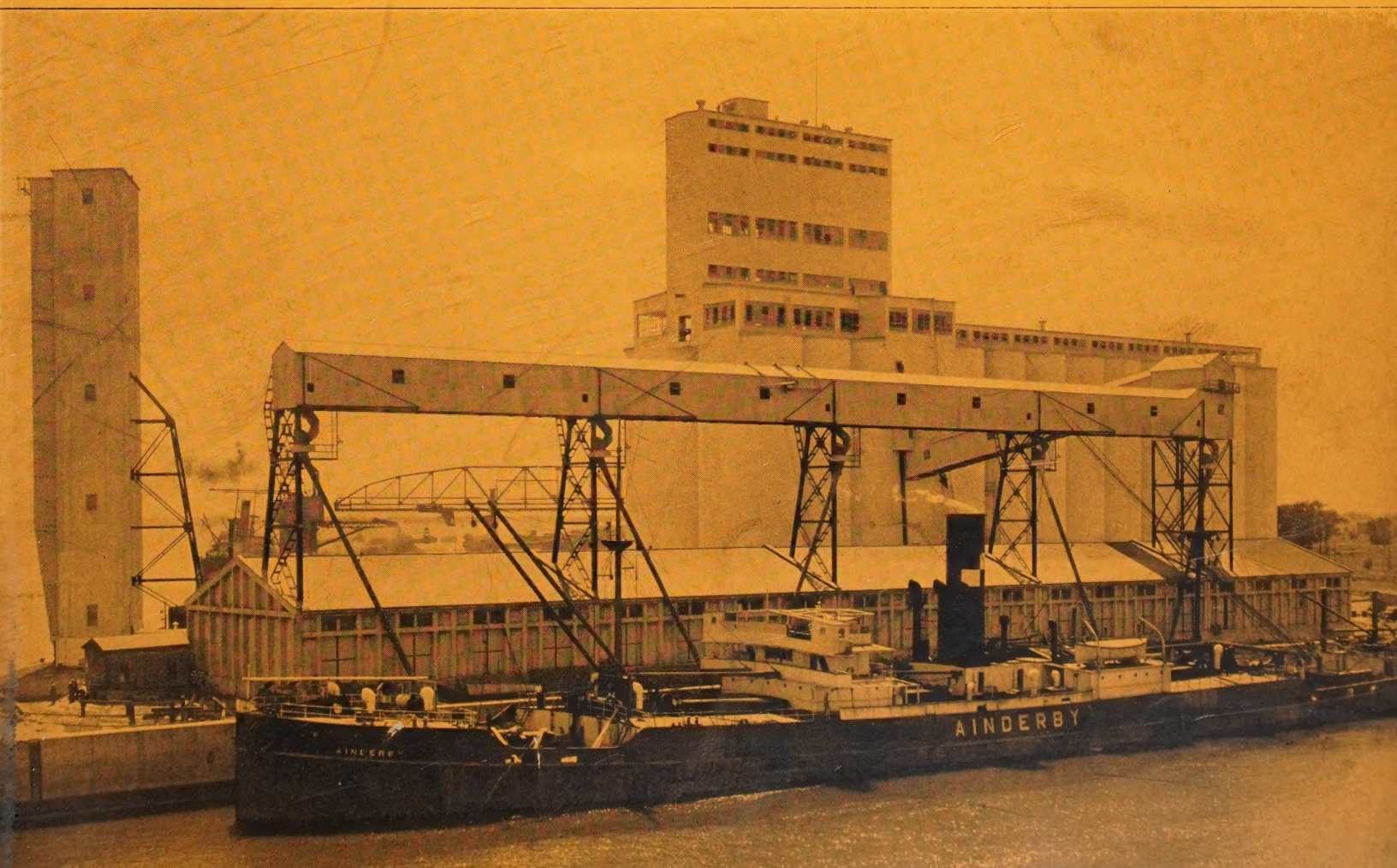
A Merger of Grain Dealers Journal, American Elevator & Grain Trade, Grain World and Price Current-Grain Reporter

In This Number

Helping the Farmers—of Other Countries
The Advantage of Attractive Surroundings
Meeting Truck Merchants Competition
Crop Insurance and Farm Storage
Commodity Exchange Act as It Affects the
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Story of the Drouth
American People Misled by Demagogs
Ohio Trade Reviews New Corn

Highway Carriers Meet
Wheat Control in France
Waste in Government Seed Buying
Amendments to Corn Standards Effective
Jan. 20
Soybean Utilization
Cheaper Turkey Rations
Vitamin A in Corn Gluten Meal
Grinding Grain and Roughage

2,000,000 Bus. Reinforced Concrete Elevator of Three Rivers Grain & Elevator Co., at Three Rivers, Quebec
[For description see page 343]



Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

HAVING YOUR name in this directory will introduce you to many old and new firms during the year, whom you do not know or could not meet in any other way. Many new concerns are looking for connections, seeking an outlet or an inlet, possibly in your territory. It is certain that they turn to this recognized Directory, and act upon the suggestions it gives them. The cost is only \$10 per year.

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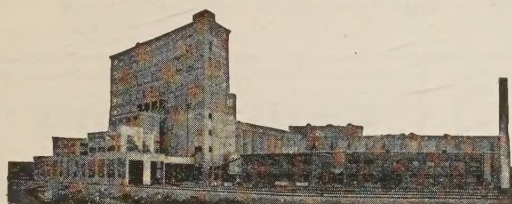
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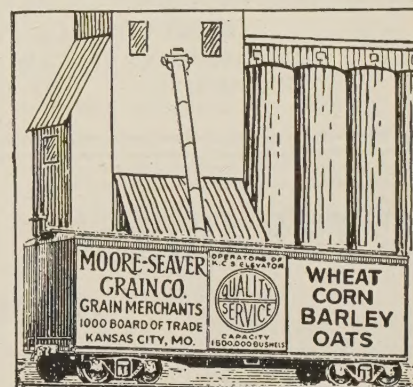
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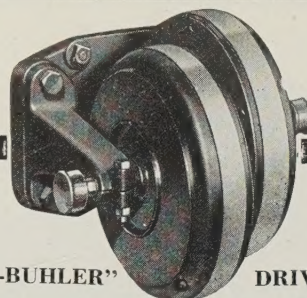
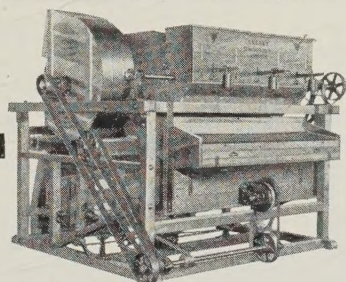
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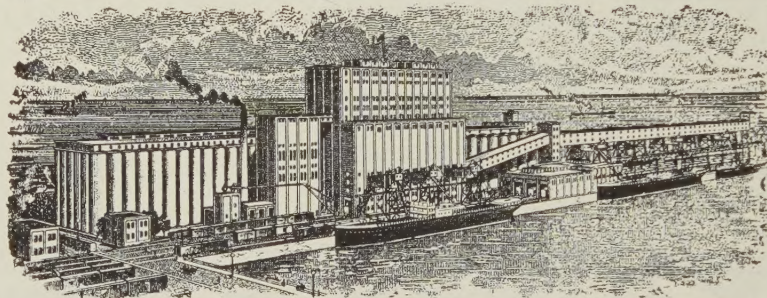
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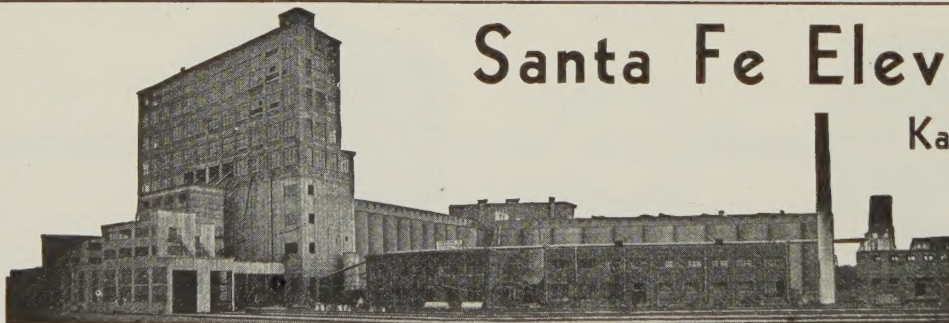
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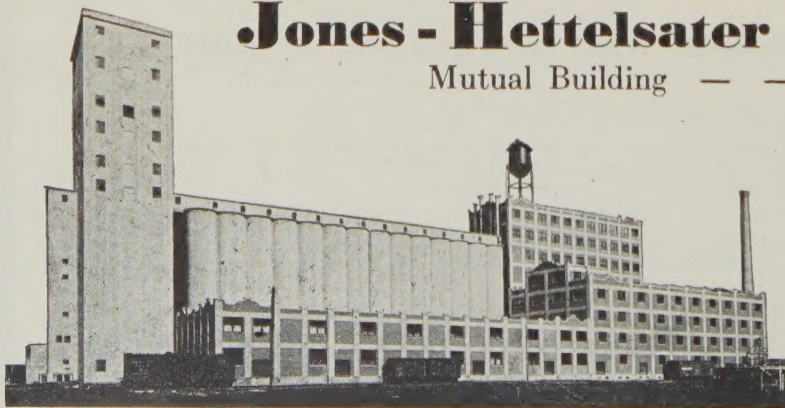
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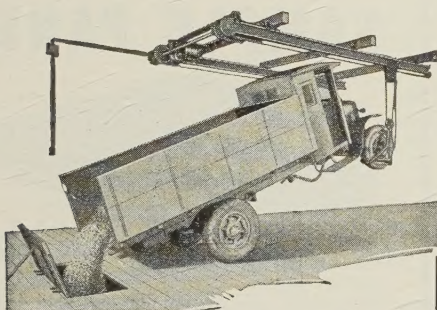
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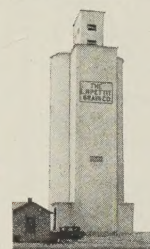
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Oakwood—15,000 bus.; frame construction; fair condition; electric power; feed mill in connection; normal year handles about 100,000 bus.

Muncie—40,000 capacity; frame; fair condition; electric. Normally handled 75,000 bus.

Bronson—15,000 bus.; frame; good condition, electrically equipped; handles grain rapidly, 50,000 bus. normal years. Can be handled in connection Muncie or Oakwood. All located in Vermillion County on P&E Ry of N.Y.C. Geo. C. Arnold or Oakwood State Bank, Oakwood, Ill.

BARGAIN IF TAKEN AT ONCE—Some one is always looking for an elevator at a good grain point and reads these ads just like you're doing now, so if you wish to dispose of your present property, enlarge your present interests, or embark in the grain business, USE these columns to your best advantage just as others are doing. WE WILL assist you in the composition of copy free. We are in business to be of service to YOU. There is no wrong time to put an ad in the columns of the Journal. TRY IT.

ELEVATORS WANTED

BUY OR LEASE grain and side line business in good trade territory. Or furnish capital and manage business on per cent. Successful record as business builder and money maker. Good credit manager. Experienced lumber, coal, feed and petroleum products. Prefer Iowa or surrounding states. What have you? Give full particulars. 76V4, Grain & Feed Journals, Chicago.

KANSAS Elevator practically sold after three insertions. Here's what the advertiser writes: "We enclose check for three insertions of our ad. We have had more than a dozen inquiries from our ad and believe that we will be able to effect a sale." This proves conclusively the value of a Journal Want-Ad.

HELP WANTED

WANTED—Salesmen to handle best line of farm salt to elevators and stores on commission basis. For particulars, write Box 328, Saginaw, Mich.

WANT RELIABLE MAN, calling on grain elevators in Kansas, Oklahoma and Texas, to handle complete line of equipment as a side line; used by every elevator, easy to sell; liberal commission. Write full details relative to present connection and territory covered. Address 76Q6, Grain & Feed Journals, Chicago, Ill.

SITUATION WANTED

COMPETENT elevator manager with several years' experience desires change of location. Grain men and banks for reference. Address 76U8, Grain & Feed Journals, Chicago, Ill.

COMPETENT AND EXPERIENCED elevator managers, foremen, bookkeepers, auditors, second men and solicitors can easily and quickly be found through an ad in the "Help Wanted" column of the Grain and Feed Journals, Consolidated, Chicago, Ill.

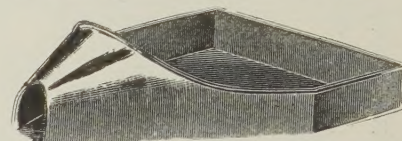
SAMPLE ENVELOPES

SAMPLE ENVELOPES—SPEAR SAFETY—for mailing samples of grain, feed and seed. Made of heavy kraft paper, strong and durable; size 4½x7 inches. Have limited supply to sell at \$2.35 per hundred, or 500, \$10.00 plus postage. Sample mailed on request. Grain & Feed Journals, 332 S. La Salle St., Chicago, Ill.

RAT EXTERMINATOR

RAT LUNCHES—Kills rats and mice without poison. Ready to use. Just lay them out. Endorsed by agricultural authorities. \$1 large package—\$3.50 a carton prepaid. Salesmen-Distributors wanted. Rat Lunches Co., Carroll, Ia.

SAMPLE PANS



Formed by bending sheet aluminum, reinforced around top edge with copper wire. Strong, light, durable. The dull, non-reflecting surface of aluminum will not rust or tarnish; assists users to judge of the color and to detect impurities.

Grain Size, 2½x12x16½", \$2.00; Seed Size, 1½x9x11", \$1.65, at Chicago.

GRAIN & FEED JOURNALS

Consolidated

332 So. La Salle St., Chicago, Ill.

Statement of the Ownership, Management, Circulation, Etc., Required by the Act of Congress of August 24, 1912,

of Grain & Feed Journals Consolidated, published semi-monthly at Chicago, Ill., for October 1, 1936.

State of Illinois, County of Cook, ss.—Before me, a notary public in and for the state and county aforesaid, personally appeared Charles S. Clark, who having been duly sworn according to law, deposes and says that he is the business manager of the Grain & Feed Journals Consolidated, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are: Publisher, Grain & Feed Journals Consolidated, Inc., Chicago, Ill.

Editor, R. R. Rossing, Chicago, Ill.
Managing Editor, Charles S. Clark.
Business Manager, Charles S. Clark, Chicago, Ill.

2. That the owners are: (Give names and addresses of individual owners, or if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock):

Grain & Feed Journals Consolidated, Inc., 332 S. La Salle St., Chicago, Ill.

Charles S. Clark, 332 South La Salle St., Chicago.

3. That the known bondholders, mortgages, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages or other securities are: (If there are none, so state.)—None.

4. That the two paragraphs next above giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is....(This information is required from daily publications only.)

CHARLES S. CLARK,

Business Manager.

Sworn to and subscribed before me this 22nd day of October, 1936.

(Seal)

(My commission expires November 27, 1936.)

JOHN A. AITKINS,

Notary Public.

KEEP POSTED

GRAIN & FEED JOURNALS CONSOLIDATED

332 So. La Salle St., Chicago

A consolidation of Grain Dealers Journal, American Elevator & Grain Trade, Grain World and Price Current-Grain Reporter.

Gentlemen:—In order to keep us posted regarding what is going on in the grain and feed trades outside our office, please send us the *Grain & Feed Journals* twice each month. Enclosed find Two Dollars for one year.

Name of Firm

Capacity of Elevator

Post Office

State

MACHINES FOR SALE

CORN CUTTER & Grader—has motor—used very little. 76D6 Grain & Feed Jnrls., Chicago.

MOISTURE TESTER with new fittings at a bargain, also scales. W. W. Pearson, Reynolds, Ind.

FEED MIXER—one ton—floor level feed—has motor—good as new. Write 76D8 Grain & Feed Journals, Chicago, Ill.

HAMMER MILL with 25-h.p. motor and all attachments. Priced to sell. Write 76D7 Grain & Feed Journals, Chicago, Ill.

FEED MIXER for sale, has motor, and a late machine. Need space. Will sacrifice. Write 76D5 Grain & Feed Journals, Chicago, Ill.

ALLIS-CHALMERS 15 hp motor; 5"x8" bucket elevator, complete; good and safe truck dump; 4 bu. auto. scale. W. W. Pearson, Reynolds, Ind.

VERTICAL MIXER bargains, priced delivered; also re-built motor bargains, guaranteed same as new. Address Midwest, 728 E. Delaware, Kansas City, Mo.

FOR SALE—1 JB Hammermill No. 2, \$225; one 25 barrel Midget Mill, \$200; one 20 hp. 60 cycle, 220 phase Fairbanks-Morse motor, \$200; all f.o.b. our city. Wolfram Grain Co., Brownsburg, Indiana

ANDERSON'S SUPERIOR FEED MIXERS
New and used, above and below floor hoppers, 500, 1,000 and 2,000 pound sizes. Best Hog Feeders made, three sizes. Buy direct from factory. Write for circulars and prices. Anderson Manufacturing Co., Paris, Ill.

FOR SALE

30 hp Papee Mill complete with motor
No. 4 Monitor Receiving Separator
No. 122 Standard Seed Cleaner
50 hp Type Y, F-M Engine
26" Bauer Attrition mill with 2, 25 hp motors
½ ton Vertical Feed Mixer
½ ton Horizontal Feed Mixer
Send for complete list of rebuilt machinery.
Sidney Grain Machinery Co.
Sidney, Ohio

MOLASSES MIXING UNIT

Here is a real opportunity for some one to purchase a complete molasses feed mixing unit at small percentage of its original cost. The unit consists of: 1 ton capacity Duplex Horizontal mixer with 10 h. p. motor; molasses agitator with 7½ h. p. motor; molasses pump with 1 h. p. motor, all necessary gauges, tanks, piping, transformers. Used but a short time. All equipment in good condition. Can be placed in operation immediately. Guaranteed to be as represented. You know the original cost of such equipment; make me an offer. I'll deliver it to your plant. 76Q13, Grain & Feed Journals, Chicago, Ill.

WANTED—Grain Dealers who are contemplating installing new machinery to use the "Machines Wanted" columns of GRAIN & FEED JOURNALS in securing prices and estimate of machines for sale. We can save you money. More than value received.

Affidavit of Weight
(Duplicating)

This form is designed for use in making sworn statements of amount of grain loaded to substantiate claims for loss of grain in transit or when dispute arises. Printed on bond paper, in black ink, size 5½x8½ inches, and bound in books of 50 blanks, perforated, and 50 duplicates, with heavy binders board bottom and hinged pressboard top, with two sheets of carbon. Order Form 7 AW. Weight, 8 oz. Price 75c; three copies \$2.00, plus postage

Grain & Feed Journals
Consolidated

332 S. La Salle St., Chicago, Ill.

MACHINES WANTED

WANTED—Used Needle Screen Gravity Separator and motor driven Dockage Tester. Mann & Mann, Hartley, Ia.

WANTED—29D Clipper; Sutton-Steele Gravity Cleaner; No. 6 Monitor; Corn Cracker & Grader. Address 76U12, Grain & Feed Journals, Chicago, Ill.

THE WANTED-FOR SALE DEPARTMENT of GRAIN & FEED JOURNALS is a market place where buyer and seller, employer and employee, and those offering investments can meet to their mutual advantage and profit and it will pay every subscriber to give these columns a close study twice each month, because of the constantly changing variety of opportunities seeking your consideration.

MOTORS—GENERATORS

ELECTRIC MOTORS, Generators, Air Compressors, engines, pumps, all makes, types and sizes. All completely rebuilt. One Year Guaranteed and attractively priced. Write us on your requirements. Rockford Electric Equipment Co., 728 South Wyman St., Rockford, Illinois.

SAVE on MOTORS and GENERATORS

Write for new Free Catalog of guaranteed rebuilt Motors, Generators, Pumps, Compressors, etc. We Save you Half. Your Idle equipment taken in trade. Specials in totally enclosed motors, as well as other Bargains.
Chicago Electric Co., 1331 W. 22d St., Chicago.

SCALES FOR SALE

MOTOR TRUCK SCALES, all capacities; guaranteed; lowest prices; terms. Also used scales. Bonded Scale Co., Manufacturers, Columbus, O.

SELL YOUR SECOND HAND Machines
Now—tomorrow they will not be worth as much as they are today. A shiny machine which has just been in operation sells quicker and brings a bigger price than a dirty, rusty one.

ENGINES FOR SALE

ANY KIND, ANY SIZE, Any Price engine which is not in use, and which you wish to sell, will find many ready buyers if advertised in the "Engines For Sale" column of GRAIN & FEED JOURNALS. Try it.

SEEDS FOR SALE

SEED OATS that grow and win favor with those who plant them. Rice Grain Co., Metamora, Ohio.

Every penny invested in a Journal "Wanted—For Sale" ad returns an amazing per cent of profit.

Shippers'
Certificate of
Weight

for use in advising receivers of the amount and grade of grain loaded into a car. Especially adapted for filing claims for Loss of Weight in Transit. Each certificate gives: "Kind of scale used; Station; Car Number and Initials; Shipper's Name;—lbs. equal to—bus. of No. —; Date scales were tested and by whom; car thoroughly examined and found to be in good condition and properly sealed when delivered to the ————R. R. Co.; Seal Record, name and number, sides and ends; marked capacity of car; date; name of the weigher." On back is a form for recording the weight of each draught.

Printed and numbered in duplicate. Originals on Goldenrod Bond; duplicates on tough pink manila in two colors of ink. Well bound with heavy hinged pressboard covers. 75 originals, 75 duplicates and four sheets of carbon paper. Size 4½x4¾ inches. Weight 11 ozs.

Order No. 89 SWC.
Price \$1.00, plus postage

Grain & Feed Journals
CONSOLIDATED
332 So. La Salle St., Chicago

Scale and Credit Tickets

Form 51 Duplicating contains 100 leaves of white bond paper, each leaf bearing five tickets like one illustrated herewith, machine perforated for easy removal, and 100 leaves of yellow post office paper, each leaf bearing five duplicates which remain in the book. Also 4 sheets of No. 1 carbon. Size of book 5½x13¼ inches, check bound, well printed. Each leaf is one ticket wide and five tickets deep.

Order 51 Duplicating 500 tickets. Price, \$1.00, plus postage. Weight, 1¾ lbs.
Cash with order for twelve books earns 10% discount.

Send all orders to

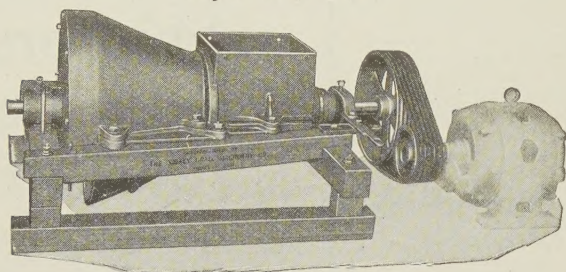
Grain & Feed Journals Consolidated
332 So. La Salle St., Chicago, Ill.

No.	_____ 19 _____		
Load of	_____		
From	_____		
To	_____		
Gross	_____ lbs.	\$ _____	100 Due to
Tare	_____ lbs.	_____ or Order.	
Net	_____ lbs.		
Net	_____ bus.	_____ lbs.	Weigher.

(Three-Fourths Actual Size)

Sidney Corn Shellers

Hyatt Equipped



All shellers are adjustable for different kinds and sizes of corn.

Made in five sizes 80 to 1,500 bushels per hour. Available in several styles.

Be prepared to do a bigger and better shelling business. These shellers cost so little and do so much you can't afford to be without one.

Send for descriptive literature.

The Sidney Grain Machinery Co.

Sidney, Ohio

*Complete Equipment for Grain Elevators
and Feed Mills*

Grain Shipping Books

Record of Cars Shipped facilitates keeping a complete record of each car of grain shipped from any station, or to any firm. It has the following column headings: Date Sold, Date Shipped, Car Number, Initials, To Whom Sold, Destination, Grain, Grade Sold, Their Inspection, Discount, Amount Freight, Our Weight Bushels, Destination Bushels, Over, Short, Price, Amount Freight, Other Charges, Remarks. Book contains 80 double pages of ledger paper, size $9\frac{1}{2} \times 12$ inches, with spaces for recording 2,320 carloads. Well bound in heavy black pebble cloth with red keratol back and corners. Shipping weight, $2\frac{1}{2}$ lbs. Order Form 385. Price \$2.50, plus postage.

Sales, Shipments and Returns. Is designed to save time and prevent errors. The pages are used double; left hand pages are ruled for information regarding "Sales" and "Shipments"; right hand page for "Returns". Column headings provide spaces for complete records of each transaction, one line. Book contains 80 double pages of ledger paper, size $10\frac{1}{2} \times 16$ inches, with 8-page index. Spaces for recording 2,200 cars. Bound in heavy canvas with keratol corners. Weight, $3\frac{3}{4}$ lbs. Order Form 14AA. Price \$3.25, plus postage.

Grain Shipping Ledger for keeping a complete record of 4,000 carloads. Facing pages are given to each firm to whom you ship and account is indexed. Book contains 80 double pages of ledger paper with 16-page index, size $10\frac{1}{2} \times 15\frac{1}{2}$ inches, well bound with black cloth covers and keratol back and corners. Weight, 4 lbs. Order Form 24. Price, \$3.50, plus postage.

Shippers Record Book is designed to save labor in handling grain shipping accounts and gives a complete record of each car shipped. Its 80 double pages of ledger paper, size $9\frac{1}{2} \times 12$ inches, provide spaces for 2,320 carloads. Wide columns provide for the complete record of all important facts of each shipment. Bound in heavy black cloth with keratol back and corners. Shipping weight, $2\frac{1}{2}$ lbs. Order Form 20. Price \$2.50, plus postage.

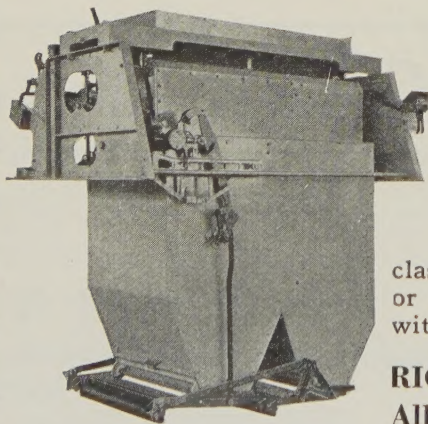
Grain & Feed Journals

CONSOLIDATED

332 South La Salle St., Chicago, Ill.

GRAIN SHIPPERS!

**WATCH YOUR PRICES!
WATCH YOUR WEIGHTS!**



Both are equally important — Don't rely on obsolete, worn-out scales.

Have them put in first-class condition, or replace them with the modern

**RICHARDSON
All - Automatic**

Grain Shipping Scale

ACCURATE and SPEEDY

Richardson Scale Company

Factory: Clifton, N. J.

37 W. Van Buren St., Chicago, Illinois

Minneapolis, Minn.

Wichita, Kansas

Grain Receiving Books

Grain Receiving Register for recording loads of grain received from farmers. It contains 200 pages of ledger paper $8\frac{1}{2} \times 13\frac{3}{4}$ inches, capacity for 8,200 loads. Some enter loads as received, others assign a page to each farmer, while others assign sections to different grains. Bound in strong board covers, canvas back. Headings of columns are: "Date, Name, Kind of Grain, Gross, Tare, Net, Bushels, Pounds, Price, Amount, Remarks." Weight, $2\frac{1}{4}$ lbs. Order Form 12AA. Price \$2.50, plus postage.

Wagon Loads Received has columns headed: "Month, Day, Name, Kind, Gross and Tare, Net Pounds, Bushels, Pounds, Price, Dollars and Cents, Remarks." Contains 200 pages of ledger paper size $9\frac{1}{2} \times 12$ inches, providing spaces for 4,000 loads. Bound in heavy boards with strong cloth covers and keratol corners and back. Weight, 2 lbs. Order Form 380. Price \$2.50, plus postage.

Receiving and Stock Book is arranged to keep each kind of grain in separate column so each day's receipts may be easily totaled. It contains 200 pages linen ledger paper size $9\frac{1}{2} \times 12$ inches, ruled for records of 4,000 loads. Well bound in black cloth and keratol back and corners. Shipping weight, $2\frac{1}{4}$ lbs. Order Form 321. Price \$2.50, plus postage.

Grain Receiving Ledger has 200 pages linen ledger paper and 28-page index, $8\frac{1}{2} \times 13\frac{3}{4}$ inches, numbered and ruled for 44 entries. Well bound in pebble cloth with keratol back and corners. Weight, 3 lbs. Order Form 43. Price, \$3.00, plus postage.

Form 43 XX contains 428 pages. Shipping weight $4\frac{1}{4}$ lbs. Price \$5.00, plus postage.

Grain Scale Book is designed to assign separate pages to each farmer and their names can be indexed so their accounts can be quickly located. It contains 252 numbered pages and 28-page index of high grade linen ledger paper $10\frac{1}{2} \times 15\frac{1}{2}$ inches. Each page will accommodate 41 wagonloads. Well bound with heavy board covers with cloth sides and keratol back and corners. Weight, $4\frac{1}{2}$ lbs. Order Form 23. Price, \$4.00, plus postage.

Grain & Feed Journals

CONSOLIDATED

332 South La Salle St., Chicago, Ill.

GRAIN & FEED JOURNALS

CONSOLIDATED

INCORPORATED

332 S. La Salle St., Chicago, Ill., U.S.A.

Charles S. Clark, Manager

A merger of
GRAIN DEALERS JOURNAL
Established 1928

AMERICAN ELEVATOR &
GRAIN TRADE
Established 1882

THE GRAIN WORLD
Established 1928

PRICE CURRENT—GRAIN REPORTER
Established 1844

Published on the second and fourth Wednesdays of each month in the interests of better business methods for progressive wholesale dealers in grain, feed and field seeds. It is the champion of improved mechanical equipment for facilitating and expediting the handling, grinding and improvement of grain, feeds and seeds.

SUBSCRIPTION RATES to United States, Canada and countries within the 8th Postal Zone, semi-monthly, one year, cash with order, \$2.00; single copy current issue, 25c.

To Foreign Countries, prepaid, one year, \$3.00.

THE ADVERTISING value of the Grain & Feed Journals Consolidated as a medium for reaching progressive grain, feed and field seed dealers and elevator operators is unquestioned.

Advertisements of meritorious grain elevator and feed grinding machinery and of responsible firms who seek to serve grain, feed and field seed dealers are solicited. We will not knowingly permit our pages to be used by irresponsible firms for advertising a fake or a swindle.

LETTERS on subjects of interest to those engaged in the grain, feed and field seed trades, news items, reports on crops, grain movements, new grain firms, new grain elevators, contemplated improvements, grain receipts, shipments, and cars leaking grain in transit, are always welcome. Let us hear from you.

QUERIES for grain trade information not found in the Journal are invited. The service is free.

CHICAGO, ILL., OCTOBER 28, 1936

JULY CORN as an old crop future is selling at an unnatural discount under December delivery.

CHEER UP. Oklahoma's September rainfall has been 253 per cent of normal.

SAVE POSTAGE and stationery by correcting mailing lists from the many business changes reported in our grain trade news columns.

BY NO stretch of the imagination can the government's deal in seed corn that failed to germinate be visioned as "orderly marketing," whatever that is.

RUBBER checks have so incriminated a trucker corn merchant of Walthill, Nebr., that his mother is out raising money to make his checks good. Altho he gave checks for corn at the elevator at \$1.14 a bushel, he peddled his purchases along the road at \$1, and seems to have been laboring under the impression that he was a real corn merchant.

RAILROADS soon will go down on their knees to thank the A.A.A. for preventing a car shortage by plowing under the crops. Already we have a shortage of coal cars.

THE JUDGMENT of the Canadian Wheat Board in selling while the selling was good seems in a fair way to be vindicated now that Argentina has begun again to undersell Canada at Liverpool.

WITH the government lending money right and left on the flimsiest security, it seems inconsistent to impose a fine of \$2,000 on a Southern railroad company for extending credit for a few days to a Georgia mill on its freight bill.

FARMERS themselves have it in their power to create a big bull market in soybeans, by feeding the meal from which the oil has been pressed. The crushers have an unlimited outlet for the oil, but their buying power depends upon the demand for oil cake.

REMOVAL of restrictions always promotes trade; and since the margin requirement on grain futures was reduced the open interest in wheat on the Chicago Board of Trade has climbed from an average of 91,259,000 bus. during the month of September to 100,500,000 bus. at present, the largest for some months.

RAISING your own bid for any grain convinces your patrons you are not disposed to pay all you can afford. Each time a farmer succeeds in inducing a country buyer to raise his bid growers who learn of the raise are encouraged to persist in demanding a raise thereafter. The buyer who refuses to raise his posted bid at least convinces the sticklers that he can not afford to pay more.

NOW that flint corn has been disposed of effective Jan. 20, the next problem is "cereal oats." The word cereal is misleading, injected into the rules for grading by the college-trained bureaucrats, as a more elegant term than "mill oats." Of course it is immaterial whether the objectionable oats came right off the farm or out of an oatmeal mill. To designate them cereal oats or mill oats imposes on the inspector a duty he is not qualified by his information to discharge, as he can not go into the origin of the grain but must work on what he sees in the sample pan. The one designation that fits in any case is "pin oat," as they must pass thru a sieve having perforations only 0.064 inch wide. One benefit accruing to the country buyer is that the designation "pin oats" is that the word is sufficiently discreditable to warrant a discount when buying from the farmer.

ELEVATOR buckets of the latest design are so much more efficient than those now in general use that it pays to scrap present equipment to install the new. A greater improvement in elevator cups has been accomplished in the past five years than was achieved in the 150 years since Oliver Evans invented the elevator leg in 1785.

TRADING HOURS on the Chicago Board of Trade need not be changed again if the referendum Nov. 3 does away with daylight saving time in winter, as seems likely. One beneficial effect would be the extra hour to get out the mail after the market closes. Constant changing of city time should make it clear that Board of Trade hours should be regulated by the standard time that has the proper relation to standard times controlling grain markets in other cities.

THE WEATHERMAN is making a most persistent effort to encourage winter wheat growers to increase their acreage and they have been responding with an enthusiasm that gives the champions of planned scarcity a cold chill. The precipitation the last three months has provided sufficient moisture to give all fall sown grains a splendid start, so energetic hustlers are sowing an increased acreage with the hope of supplying the domestic needs of the U. S. A. during the crop year of 1937-38.

POLITICAL readjustments such as the abolition of transit on grain attempted by the Interstate Commerce Commission bring gains to certain groups only by imposing losses upon others. No net profit results. Vested interests built up at milling in transit points are destroyed. It is obvious that if it costs more to mill, clean or otherwise process at points of origin or destination than at a naturally selected intermediate point the spread between producer and consumer is widened to the loss of both.

AN EMPLOYEE of a Mississippi mixed feed company sued his employer for damages on the ground that he contracted chronic bronchitis and other diseases by breathing dust in the feed plant. The Supreme Court of the state has just decided in favor of the employer because the evidence did not show the mill to have been guilty of negligence and even the organic dust might be harmful that fact did not establish the liability of the owner of the plant. Operators of grain handling and grinding plants are exercising greater care in selecting new employees and requiring a thoro physical examination by a reputable physician and a formal certification of his findings. The occupational disease laws of many states make the employment of asthmatic workmen in dusty plants most decidedly undesirable.

THE ACTIVE interest in the grain grading schools held recently has encouraged the holding of other sessions, the Toledo school being one of the latest, and more are being planned. The shippers must sell their grain by grade so will profit largely by buying it by the same grades.

THE "TAKE" of the bureaucrats administering \$1,546,518,046 A.A.A. benefits was \$94,676,768.55, from May 12, 1933, to July 31, 1936, not including cotton option and cotton producers' pool transactions. In other words, the farmers and other taxpayers are just \$94,000,000 poorer thru employing the government to collect and hand back the billion and one-half.

MIXING is easy, too easy. Separation is difficult, so impossible in some mixtures that the proper course is not to mix different kinds of grain, different grades of the same grain, or foreign material. To prove that unmixed grain is worth more in the market we have only to call attention to the demand for "country run" grain, which contains only what was harvested near that station.

BURNING COFFEE, dumping it in the sea and cutting down coffee trees were among the desperate expedients resorted to by the Brazilian Government Coffee Control in an endeavor to boost the price of coffee, by creating an artificial scarcity, like our own A. A. A. In 5½ years the Government destroyed 38,000,000 bags of coffee of an approximate value of \$225,000,000. The bankers are still holding 9,414,465 bags of Government coffee, and it was announced Oct. 14 that the Government would destroy an additional 392,858 bags. Those who understand the harmful effects of Government interference in marketing will not be surprised to learn that this week Rio coffee sold on the New York Exchange at 3½ cents per pound, which is the lowest in history.

FOR SEVERAL years past the politicians have been doing their level best, or worst, to retard in the United States the tide of world-wide recovery from the depression of 1930-32. That the agitators have failed, should encourage a feeling of optimism and confidence in the future. The world has always recovered from previous depressions and it was inevitable we should recover from the one whose passage no one regrets. When we read this week that 146 industrial corporations reported a 69 per cent increase in combined earnings for the September quarter, as compared with a year ago, it is safe to assume this wave of prosperity will spread to the grain business as soon as the government abandons its policy of cutting down production.

Crop Insurance and Farm Storage

Farm aid will come first with the statesmen at Washington regardless of which party comes into power after the election; and the bureaucrats can be depended upon to push their present schemes for what they choose to call "crop insurance," to conceal their real purpose to foist the "ever-normal granary" idea upon the unsuspecting farmers.

The ever-normal granary has been sufficiently explained by its chief advocate, the Sec'y of Agriculture. It contemplates storage on the farm, the insurance to consist of a return to the farmer in poor years of part or all of the stored grain in lieu of cash.

Storage on the farm has its place when the grain is to be consumed on the farm, as is the case with most of the cribbed corn, only 15 per cent of the corn produced moving out of the county where grown. But the feed grown on the farm for the farmer's own use seldom affords a surplus as he usually can manage to feed it out as planned.

Any scheme of crop insurance that involves storage of small grains such as wheat on the farm is open to numerous objections, among them being the following:

The price does not advance during the period of storage an additional amount to cover the cost of storage on the farm, as an average of a number of years. If North American farmers hold their wheat for several months it is only to sell it in competition with wheat dumped at that time by Argentina and Australia. The impractical Federal Farm Board tried out the holding off the market theory on a sufficiently grand scale by buying 370,278,449 bus. of cash wheat and 538,337,000 bus. of futures, resulting in a net loss to the revolving fund of \$184,153,232. Under the present crop insurance and ever-normal granary scheme this loss would fall upon the farmers selling their wheat.

The farmer is not equipped to care for stored grain. He can not run the grain to prevent heating, but must bear the risk of deterioration by mold and insect infestation. "Combined" wheat presents an additional hazard. Wheat arriving in the Southwestern markets during the spring always contains more weevil than the inspectors find in wheat commercially stored after harvest.

Experience has taught the farmer, it is best to market the wheat immediately after harvest, as the roads then are good and he has only one handling. The farmers have not taken advantage to any important extent of the farm storage laws enacted in Iowa, Illinois, North and South Dakota and Montana.

Country and terminal elevators have

ample capacity to store the grain and can do so more efficiently and at less cost than the farmer. Instead of forcing the farmer to make a large investment in farm bins, arrangements could be made for the grain to be held in commercial storage, thus avoiding loss by the grain going out of condition. It is hardly to be expected, however, that the proponents of the ever-normal granary would accept this solution as it would be impossible to pay the farmer his insurance "in kind."

Meeting Truck Merchants Competition

The secretary of the Kansas Grain Dealers Ass'n is much perturbed because thirty-two more miles of railroad is being scrapped and more elevators being left stranded without shipping facilities. It seems that over five hundred miles of Kansas railroads have been abandoned because of declining patronage of the people living along the scrapped lines.

The roving peddlers who merchandise any commodity which seems to promise compensation for their transportation and venturesome enterprise are not interested in the railroads or the country communities who have been taxed to maintain their free right of way. These nomadic merchants are looking for a profit hoping that the day of freedom from railroad competition will soon bless them with more favorable markets.

The railroad labor unions and the restrictions and regulations of the various boards, bureaus and commissions have increased the cost of railroad transportation to a figure that makes it easy for hustling truckers to grab the business and put both the country merchants and the railroads out of business.

Grain merchants in different sections of the country have been forced to engage trucks and transport grain from farm to elevator and elevator to market, in order to revive their declining business. The story of the Ohio grain merchant which is recited in "Driveway Observations," this number, is most interesting because it tells exactly how one country elevator operator has met cut-throat truck competition and checked the decline of what was once a prosperous business. Some operators of country elevators have engaged in the trucking business voluntarily, but many have been forced to transport their purchases and sales in order to rejuvenate their business which was being taken from them by truckers of unknown addresses and unknown responsibility. The grain merchant with his established place of business and reputation for fair dealing is in position to meet the irresponsible truckers and re-establish his business on a profitable basis through the systematic operation of his own trucks for the promotion of his own business.

The Advantage of Attractive Surroundings

A photograph of a most attractive grain office recently completed for an Ohio grain company is reproduced on page 342, this number.

We feel certain that every country elevator operator would thoroughly enjoy the privilege of inspecting all the modern facilities of this convenient grain office. Every feature of its exterior reflects the business acumen of its owners. We feel certain, that not only is the new structure comfortable in all seasons, but its commodious offices guarantee systematic and careful attention for all customers.

Merchants in every line of business who exhibit modern, up-to-date facilities, kept in order for efficient service are made to feel the magnetic lure of their surroundings by the volume of new business that comes in unsolicited.

Naturally, discerning buyers and sellers always prefer to deal with merchants equipped to specialize in their chosen lines. No farmer would think of going to a furniture dealer or to a boot and shoe shop for information regarding the grain markets. He appreciates that would be a waste of time, so he goes direct to merchants who specialize in grain and keep posted regarding values and methods of marketing. Hence, it is natural that the orderly, well-equipped grain office helps to attract new business. If you will visit some town having two or more elevators, one dilapidated, run-down, unpainted and out-of-date, while the modern house is kept freshly painted and protected against the elements by securely nailed iron cladding you will not need to ask who handles the most business at the station.

The exterior appearances tell the story and influence newcomers in the market to select freshly painted, spick and span plant to handle his grain. The natural inference of the new-comer is that the operator of the freshly painted house is better equipped in every department to handle his patronage more economically and more efficiently, and, seldom is he mistaken. Appearances have always wielded a potent influence with customers entering a market for the first time, and

the exterior appearances of a grain office and a grain elevator are no exception, they will always help to draw the more desirable, discriminating trade. It pays well to keep your plant clean, orderly and up-to-date. Even farmers prefer to do business with progressive, enterprising merchants.

Helping the Farmers—of Other Countries

No one has claimed, and even the loud-mouth agitators have not ventured to suggest that the autocrat of the Department of Agriculture, kept the farmers of foreign countries advised of acreage reductions of the crops plowed-up as a result of the activities of the A. A. A., but the consuls of all the foreign countries producing excess grain saw to it that their home governments were daily notified of all the restrictions placed upon the farmers of the U. S. A. by our agricultural dictators. As a result, Argentina, Australia, Poland, Canada, Latvia, Roumania and even India has taken advantage of the United States' scarcity and scraped up a few more cargoes to ship over our tariff wall.

Today, partially because of our planned scarcity, we are importing a large volume of corn from the Argentine, wheat from Canada, and smaller quantities of other grains from other countries, depressing the price of all home-grown grains. Our consumers, of course, are delighted to have the markets depressed by these large importations. While the agricultural dictators may have thought it were possible to help the farmers of the U. S. A. by their arbitrary restrictions, they overlooked the fact that grain producers of foreign lands are watching our market with ever increasing vigilance, and are now profiting from political interference with American agriculture.

Shipments of corn from the Argentine is now monopolizing the markets on all coasts. It is the same old story that whenever government has attempted to interfere with the activities of the American farmer, it has made a mess of it and instead of helping the grain grower, has harmed him beyond measure.

The misguided activities of the Federal

Farm Board followed by the restrictions of the AAA, has kept the poor farmer on a hot plate for nearly eight years, and it is time now that he be given an opportunity to conduct his own business, in his own way, and without any instructions from political meddlers.

Speculative Market an Aid to Producers

An economist, writing recently in a nationally known financial publication, makes the following comment:

"The discerning farmer today does not feel that speculation is harmful to him despite the fact that he has been told so many times by politicians out to catch the rural vote.

"Winter wheat growers this year," he says, "saw their profits boosted 25 per cent as a result of speculation and that, regardless of all the bogeys whispered about it by the politically ambitious, as well as some of its actual shortcomings, speculation in the past has been, on the whole, beneficial to the farmer.

"Here, in his opinion, is what speculation did for the winter wheat grower this year.

"Just before the winter crop was harvested, it was guessed, by speculators with a quick eye, that everything was not right in the Northwest spring wheat belt. Speculators began to buy wheat. A few days later the suspicions of a droughty condition became more plausible. Speculators took a chance of disaster overtaking the crop in that area and plunged on the long side.

"Of course they made money because wheat jumped from around 80 cents to a dollar and better. But, and here is the point, that rise took place before the bulk of the winter wheat crop was harvested, with the result that the farmer got \$1 and better a bushel for his wheat."

From Abroad

The French Government has increased the estimate of the new wheat crop by 4,800,000 bus. and now makes outturn 244,800,000 against 285 million last year.

The third official estimate of this season's Argentine corn crop is 392,500,000 bus. 13 million more than previously forecast and compared with 452 million last year. April 1 carryover from the preceding crop amounted to 36,181,000 bus., giving a total supply of 429 million.

The Czechoslovak surtaxes on imports of grains were increased by a decree published on Sept. 8, effective from Sept. 10, 1936, according to a report from Assistant Trade Commissioner Jule B. Smith, Prague. The revised rates, in Czech crowns per 100 kilos (former rates in parentheses) are as follows: Wheat and spelt, 12 (2); rye, 25 (20); barley, 36 (32); and oats, 22 (19).

The Argentine Ministry of Agriculture's recent appropriation of \$15,000,000 is the second for the construction of grain elevators at Santa Fe, Buenos Aires, Diamante, Concepcion del Uruguay and La Plata. Some 40 firms (of various nationalities) have purchased plans from the office of Grain Elevator Construction of the Argentine Ministry of Agriculture, Buenos Aires.

The beneficial rains reported last week from the Argentine have been repeated, especially over the Provinces of Santa Fe, and Entre Rios. As a result, linseed prospects in the South American Republic appear more favorable and crop estimates have been increased. Our own correspondent now considers it not unlikely that we might see an exportable surplus for 1937 amounting to over 70,000,000 bus.—Archer-Daniels-Midland Co.

Count Your Assets

If you have a clear conscience and a good liver, if you have three good friends and a happy home, if your heart has kept its youth and your soul its honesty—then you are one of life's millionaires.

Asked—Answered

[Readers who fail to find trade information desired should send query for free publication here. The experience of your brother dealers is worth consulting. Replies to queries are solicited.]

Shrinkage of Grain?

Grain & Feed Journals: Referring to a table showing weight loss in drying grain on page 284 of Oct. 14 issue we are wondering about the invisible shrink in drying. We believe we recall hearing terminal elevator operators estimate the invisible shrink as averaging around 2 to 2½ per cent.

Our own experience in kiln drying corn for seed seems to indicate that drying corn from 18 to 15 per cent is more likely to result in at least a 5 per cent shrink than the 3.53 per cent stated in the table. Possibly some of this is dust blown out by the drier.—Chauncey P. Coy & Son, Waterloo, Neb.

Ans.: The table is purely mathematical. The extra 0.53% when corn is dried down 3% comes about mathematically because the 15% is figured on a less weight that results after drying down from 18%.

Some data on shrinkage in handling are given in Asked-Answered on page 238 of Sept. 23 number.

Turkey Ration with Corn, Oats, Wheat?

Grain & Feed Journals: Have you any formulas to suggest that I could use in mixing ground corn, oats, and wheat to feed to turkeys? The information I desire is what proportion I should use of above grains to get the best results, also what else should I mix with this mix to improve it, such as yeast or something.—Yours very truly, South Side Elevator, J. L. McKinney, Rock Falls, Ill.

Ans.: A plain turkey ration containing ground corn, oats and wheat may consist of the following:

100 lbs. ground yellow corn; 100 lbs. ground wheat; 75 lbs. ground oats; 75 lbs. wheat bran; 75 lbs. meat scraps; 50 lbs. dried skim milk; 25 lbs. alfalfa leaf meal. These 500 lbs. will analyze about 20% protein, 5% fat and 5% fiber.

The feed mixer can get by with the foregoing; but it is possible to work into the ration salt, calcium carbonate, cod liver oil, bone meal, fish meal, soybean oil meal, cottonseed meal, linseed meal, kafir, milo, bearing in mind that the protein percentage must be kept high for turkeys.

For the first 6 or 8 weeks 25% protein is better than 20%. After 8 weeks 20% protein is enough to give a good marketing finish.

The salt, calcium carbonate and cod liver oil are valuable additions to the ration. It is safe to add one per cent salt, one per cent calcium carbonate and two per cent cod liver oil.

The following simple mixture of ground grains and proteins is suggested by the Syntha-Milk Laboratories:

150 lbs. ground yellow corn, 100 lbs. ground wheat, 50 lbs. ground oats, 50 lbs. alfalfa meal, 50 lbs. bran, 75 lbs. meat scraps or fish meal, 25 lbs. dried skim milk, 10 lbs. limestone, 1 lb. concentrated cod liver oil or 5 lbs. straight oil, 3 lbs. salt, 5 lbs. dried yeast. Then a mixture of whole corn and oats as a scratch feed.

To encourage industrial workers to demand unreasonably higher wages at a time when the products of industry are out of reach of a large share of the population is to distort further relationship between consuming purchasing ability and prices, according to J. C. Belden, president of the Belden Manufacturing Co.

The AAA has started to pay out the \$470,000,000 said to be designed to encourage soil conservation. It is expected that over six million farmers will receive benefit checks for conserving their own soil. While this may check the waste which has continued for many million years, it is doubtful if persons now living will profit materially from the so-called conservation.

Indiana Farmers Elevator Ass'n Re-Organized

At an evening banquet meeting in the Union Building of Purdue University, Lafayette, Ind., on Oct. 14, the Indiana Farmers Elevator Ass'n was re-organized.

PRES. H. O. RICE, Huntington, Ind., presided.

H. B. GROMMON, Plainfield, Ill., pres. of the National Ass'n of Farmers Grain Dealers, emphasized the need for ass'n work. "An appeal for a cause in legislative bodies," he declared, "must be backed by powerful organized efforts, an ass'n with many members."

A. F. NELSON, Minneapolis, sec'y of the national organization, forcefully extolled the merits of a state organization, and the services it performs for local elevators. Mr. Nelson listed among the accomplishments of the Minnesota ass'n, of which he is also sec'y, adequate state storage laws, legislation regulating railroad leases, discovery and stoppage of legislation which would force elevators to cover open bins with metal lids, assistance to local elevators in organization, re-financing, collection of claims and other services.

SECY W. L. WOODFIELD, Lafayette, called the roll of companies present. Each assured him of support for the Indiana organization, and felt the ass'n should become active.

A resolution was unanimously adopted that old officers and directors, elected at the last regular meeting, be held over until the regular meeting next spring, and that each company present pay its dues.

Electrical Weevil Killer

Dr. C. G. Lemon of the Radio Society of Great Britain has invented an apparatus to destroy the granary weevil by means of radio waves.

The grain passes down a chute, and is shaken on to a metal plate underneath a series of gas filled tubes. These tubes are electrically energized and radiations pass from the tubes to the surface of the plate at three different wave lengths, ranging from 40 meters to ultralong waves which are not used in radio communication. When the apparatus is working the tubes are, flooded with violet light and make a cracking noise.

It is calculated that a machine handling 10 tons of grain per hour would cost \$1,250. Comparatively little electrical energy is consumed. The larvae and eggs as well as the live weevil are killed.

Twelve Baking Companies at Kansas City have brot suit against the Washburn-Crosby Co. demanding payment to them of the \$1.38 processing tax on wheat flour.

Coming Conventions

Trade conventions are always worth while, as they afford live, progressive grain dealers a chance to meet other merchants from the same industry. You can not afford to pass up these opportunities to cultivate friendly relations and profit by the experience and study of others.

Dec. 8, 9, 10. South Dakota Farmers Elvt. Ass'n, Sioux Falls, S. D.

Feb. 2, 3, 4. Farmers Grain Dealers Ass'n of North Dakota, Grand Forks, N. D.

Amendments to Corn Standards Effective Jan. 20

The Department of Agriculture on Oct. 23, promulgated amendments to the official corn standards of the United States to be effective Jan. 20, 1937. These amendments pertain only to grades for flint corn and mixtures of flint and dent corn, and are as published on page 785 of the Journals for Oct. 14.

Under the official corn standards now in effect, flint corn is defined as follows: "Flint corn shall be corn of any class which consists of more than 25 per cent of flint corn." In lieu of this definition the amendment defines flint corn as follows: "Flint corn shall be corn of any class which consists of 95 per cent or more of corn of any of the flint varieties."

The amendments further provide a definition for mixtures of flint and dent corn, as follows: "Flint and dent corn shall be corn of any class which consists of a mixture of the flint and dent varieties and which contains more than 5 per cent but less than 95 per cent of corn of any of the flint varieties."

Under the amended standards a "lot" of corn coming within the definition for "Flint" corn would grade, for example, as "No. 2 Yellow Corn, Flint," and a "lot" of corn coming within the definition for "Flint and Dent" corn would grade, for example, as "No. 2 Yellow Corn, Flint and Dent."

Under the amended standards, corn of the dent varieties which contains not more than 5 per cent of flint corn would grade, for example, as "No. 2 Yellow Corn," whereas under the standards now in effect, corn of the dent varieties may contain as much as 25 per cent of flint corn and yet grade, for example, as "No. 2 Yellow Corn."

The department states that the principal purpose of these amendments is to classify flint corn, dent corn, and mixtures of flint and dent corn, as to type, with a greater degree of definiteness than under the current standards. Corn of either the flint or dent varieties is acceptable in many branches of the industry when the deliveries are kept true to type and sold for what they are, but mixtures of the two types of corn present difficulties to processors and feeders.

Get the Bugs Out of Your Business

To fall in love with your job and get the most from it, there is a simple recipe: Get acquainted with it! Explore it. No job is so dull but that it grows more interesting as one digs beneath its surface. No work is so limited but that delving into it will reveal far greater possibilities than appear on the surface.

A salesman of insecticides got tired of rattling off the same old selling talk. He decided to look deeper into his subject. He began by reading about the insects his product would kill. Soon he had a library on entomology. He collected insects. Then he mounted his specimens in a small case to carry on his business trips. He showed dealers the pests he was helping to exterminate and just what damage they did. Other salesmen had no chance in competition with him, for he made customers feel that in using his insecticide they were crusaders in a worthy cause.—*Readers' Digest*.

Should a change of commercial policy develop in some continental countries, and should some action of international character be taken to find a solution of monetary and exchange problems, which would result eventually in a renewal of more normal wheat consumption, then under the existing small margin of supply over minimum needs, wheat should be one of the first commodities to advance in spectacular fashion.—W. D. S. Sanday of Thomson & McKinnon.

Ohio Trade Reviews New Corn

Practically all sections of Ohio were heard from in the review of corn yields and condition conducted at the annual fall meeting of the Ohio Grain, Mill & Feed Dealers Ass'n, held at the Deshler-Wallick hotel, Columbus, Tuesday, Oct. 20.

The morning hours were devoted to gatherings between grain dealers, discussion of local problems and to registration as the delegates assembled.

The convention session opened with a luncheon at noon, in the Hall of Mirrors.

PRES. E. L. ALLTON, St. Paris, presided at the speakers' table and introduced the celebrities who addressed the 120 delegates present.

RAY B. BOWDEN, executive vice-pres., Grain & Feed Dealers National Ass'n, reviewed some of the moral and economic changes of recent years, affecting the grain business. Said he: "We have had wide changes in occupations in the last 30 years. Over 20 per cent of our gainfully employed are now in industries that did not exist 20 years ago.

"Surface changes we observe, but fundamentally there have been few changes in the character of the people. Science and industry have developed tools and production hundreds of years ahead of our spiritual and moral growth. Our greatest moral and spiritual development has come in the last 35 years, switching from the country to the urban attitude. Only 24 people out of each 100 are now employed in agriculture. Wives and children have become economic liabilities instead of economic assets. This is reflected in a decreased rate of growth in population.

"Every so often men swing between dictatorship and democracy. Law and attitudes change. Rapid changes in state and national laws are reflections of whims of the people.

"What does agriculture face in the future? The development of agriculture has accompanied growing population, necessitating expansion of food sources.

"Today only one-third of our land is under cultivation. Population curves have slowed down. By 1960 we may expect our population to become stationary.

"People have limited space in their stomachs and man is eating less. We have seen a drop of 40 per cent in consumption of flour. Pork consumption has decreased. Milk consumption has increased. We no longer work so hard at physical labor as our fathers. We

don't require the same volume of food that was required when more and harder physical labor was performed.

"Men have played with the idea of this country becoming self-contained, able to produce all its requirements. But actually world trade depends upon production economics. Imports and exports follow lowest costs. The greatest interference with the free flow of goods is tariffs. Governments can destroy economic balance.

"Ahead of us are a few more years of economic unrest. Twenty years from now we shall doubtless look back upon this time as the 'terrible 30's.'

"To protect our trade interests now we must do more than talk. We must join in action. Your national ass'n is now preparing a national program to correlate the interests of the grain trade, and accomplish needed benefits for the industry."

FRED POND, Buffalo Corn Exchange, talked on safeguarding of official inspection and weight certificates. "Official certificates," said Mr. Pond, "must have a reputable background to support them or they are worthless. Grain exchange weighmen and inspectors are primarily employees of the shippers. The Exchanges provide dependable authority behind the certificates.

"Federal appeal certificates are type-written, except for the original, which carries the original signature of the supervisor. The country shipper calling an appeal, is entitled to the original appeal certificate. Federal appeal certificates supersede grain exchange certificates.

"Grain at the Buffalo market is weighed with two men in attendance, a weighman employed by the elevator and a supervising deputy weighman employed by the Exchange. The validity of the weight certificates is protected by pinpoint typewriters in our office and protective recording of the original weights, in the manner of a check protector. When a country shipper receives a Buffalo weight or inspection certificate he is receiving a carefully protected document."

E. B. COPELAND, Circleville, talked on the soybean. "Progress can be defined in co-operation of effort," he said. "The American Soybean Ass'n considers the producer as well as the processor, and handler. It is concerned as much in improved and increased production as in improved processing.

"Thru the efforts of this ass'n's legislative committee the Bailey amendment to the social security act was adopted, assessing duties on importation of foreign vegetable oils, competing with soybean oil. This helps the soybean growers' market.

"Soybean production and processing has become so important in Ohio that I would not be surprised to see the Ass'n's next meeting held in this state."

NEW CORN carries high moisture due to excessive rainfall, according to reports from grain shippers all over the state. Little corn has moved to the elevators so far. Due to high moisture of the new corn grain dealers are temporarily discouraging farmers from making immediate deliveries. The real movement is not expected before Nov. 1.

MOISTURE is running 20-34 per cent. Elevators with driers expect to keep busy. Absence of frosts is causing new corn to heat quickly when shelled and binned. A few frosts would improve the keeping quality of the grain.

WIDE variations exist in yields. Most of the yields reported were at 65-70 per cent of normal. Variations ranged from 50 per cent to 80 per cent in the reports.

TERMINAL grain receivers from Buffalo and Toledo reported little new corn received. A plea for advance notice of shipments from shippers was made, so that soft corn can be moved to the elevators with greatest dispatch. If shipments of new corn can be delayed for about three weeks better prices and better condition may be expected.

E. C. EIKENBERRY, Camden, expressed his pleasure at the progress of the ass'n and congratulated its leaders.

SECY W. W. CUMMINGS, Columbus, said the directors have decided to hold the 1937 summer meeting at Cedar Point.

GUS HOLLAND, Marion, said new soybeans have been grading No. 2 yellow. Since the rains moisture has increased slightly. Most of the crop is expected to grade high.

Adjourned *sine die*.

OHIO CONVENTION NOTES

F. T. DICKEY, Fort Wayne, Ind., added another car to the list he has unfortunately lost to car thieves.

HIS MANY friends were delighted to see Joe Stryker back on the job attending Ohio meetings.

L. J. DILL Grain Co. distributed pencils and the Ohio Bell Telephone Co. provided note books to help delegates record their impressions.

AT EACH luncheon plate the Kellogg Grain & Elevator Corp. placed a card showing the U. S. Standard grade requirements for yellow, green, brown, black and mixed soybeans; also the schedule of discounts on soybeans grading lower than No. 2 yellow.

SO MANY conventions were being held in Columbus at the same time that hotels were taxed beyond capacities. In the Deshler-Wallick lobby grain dealers were given opportunity to wipe their shoes on a new \$35,000 rug.

IMPROMPTU PARTIES followed the business session, flitting from room to room about the hotel. These lasted well into the night.

REGISTRATION of delegates was in charge of J. W. Huntington, R. S. Castle, D. Leroy Neal of The Mill Mutuals which supplied the convention badges.

OHIO CONVENTION ATTENDANCE

MILWAUKEE, Wis., sent J. W. Jouno, Stratton Grain Co.

PITTSBURGH, Pa., was represented by Vincent Harper.

FROM INDIANAPOLIS were two U. S. Department of Agriculture men, O. F. Wulfekammer, and A. E. Kitchen, both from the warehouse division.

SUPPLY AND BAG men were Edwin F. Seving, Sidney Grain Machinery Co., and J. D.

[Concluded on Page 346]



Officers and directors of the Ohio Grain, Mill & Feed Dealers Ass'n held a parley the night before the convention. They are, left to right: Front row, Directors Fred E. Watkins, Cleveland; L. G. Bradstock, Wellington; R. H. Brundige, Kingston; and B. R. Hoaglin, Scott. Rear row, 2nd Vice-Pres. H. R. Wooley, Pickerington; Sec'y W. W. Cummings, Columbus; Pres. E. L. Allton, St. Paris; 1st Vice-Pres. G. E. O'Brien, Greenville; Director C. A. Hiegel, Leipsic, and Executive Vice-Pres. Ray B. Bowden of the Grain & Feed Dealers National Ass'n, St. Louis

Crop Reports

Reports on the acreage, condition and yield of grain and field seeds are always welcome. ment to country markets, are always welcome.

Odell, Neb., Oct. 23.—We have no corn. Will ship in all we use. The wheat acreage has been increased 25%, and it looks fine.—Odell Farmers Elevator Co.

Petersburg, Ind.—Farmers of Pike County broke the largest wheat acreage this fall in 10 years. Many farmers cut corn for fodder and sowed the fields in wheat.—W. B. C.

Decatur, Ill., Oct. 17.—Corn husking getting under way; however, arrivals of new corn show a high moisture content and with present mild weather gets out of condition in short order. The Illinois Oct. 1 crop report gives the production for the state at 206,618,000 bus., which is 35% less than the 1935 crop of 318,510,000 bus. and 39% below the five-year (1928-32) average production of 336,738,000 bus. Ripening of corn and early husking returns show extremely uneven yields.—Baldwin Elevator Co.

Toronto, Ont., Oct. 20.—The total production of oats, barley, spring wheat and mixed grains is estimated at 112,392,000 bus., or 19% below the figure of 138,080,000 bus. harvested a year earlier. The growth of corn for ensilage was checked by the dry spell and total production will amount to 2,425,000 tons, as against 3,034,000 tons last year. Total production of dry beans in Ontario this year is estimated at 675,000 bus., as compared with 1,032,000 bus. in 1935.—S. H. H. Symons, Statistician.

Chicago, Ill., Oct. 20.—Corn husking in many parts of the belt is being delayed because of its present poor cribbing qualities occasioned by a large quantity of late ear shoots. Some are to be found even in the most advanced fields and owing to the prolonged frostless growing weather have developed to full size, but are as yet too soft to crib. While this mixture will tend to enlarge the crop in bulk it will, on the other hand, prove a detriment to the grade unless carefully sorted when cribbed.—H. C. Donovan, statistician, Thomson & McKinnon.

Kansas City, Mo., Oct. 17.—Protein of 570 cars of wheat tested at Kansas City by the Kansas grain inspection department during September averaged 14%, and 527 cars inspected by Missouri averaged 13.74%. An average of 13.87% was shown on the combined inspections of 1,097 cars. This compares with 14.28% on 3,583 cars in August and 12.40% on 3,966 cars in Sept., 1935. For the first three months of the crop year the Kansas department reports an average of 14.05% protein on 10,063 cars tested, against 12.57% for 7,883 cars in the same period last year. The Missouri department inspections of 12,214 cars averaged 13.41% protein during the first quarter of the current crop year, against 12.23% on 10,836 cars in a like period a year ago.

Lansing, Mich.—The Michigan bean crop has suffered severely from frequent and heavy rains and frosts during the main harvesting period. The extremely early bloom was blasted but the later plantings gave considerable promise after the drouth was broken in August. However, the beans ripened unevenly because of the changed moisture conditions. Before they were mature enough to pull, the ripe beans shattered badly or sprouted in the pod from excess moisture. Rainy weather and wet grounds have made it impossible in recent weeks to cure those in process of harvesting. As a consequence, the proportion of cull beans, otherwise known as the "pick," is expected to be considerably larger than in any recent year. The production estimate, based on Oct. 1 condition, is 2,540,000 bags, or only 53% as many as were threshed in 1935. The estimated buckwheat acreage is only 19,000 against 27,000 acres last year. While a portion of the crop was helped by late-season rains, some of it was too far advanced when the rains came to be greatly benefited. Frosts also injured some of the late fields so that the prospective production is only 190,000 bus. The production for the United States is estimated at 5,860,000 bus. as compared with 8,220,000 bus. last year and 8,277,000 bus., the 5-year average.—U. S. and Michigan Depts. of Ag.

Springfield, Ill., Oct. 21.—Winter wheat sowing is now completed in many areas, and the earlier sown is up to an excellent stand and growing nicely; in places in the north all is up. Corn is now practically all safe from frost; husking nearly everywhere was getting under way; little has been cribbed because of wetness, but the week's weather was much more favorable for drying. Soybean haying is about completed; combining was generally starting, tho many fields remain too green. Alfalfa and pastures made good growth; much clover is not reviving. There is still little pasturage in the south.—E. W. Holcomb, U. S. Dept. of Ag.

Winchester, Ind., Oct. 15.—We are having fine weather now. Wheat sowing still going on. Saw wheat between Winchester and Chicago that was up enough to cover the ground. A lot of it just coming up and drills in the field seeding. Saw alfalfa hay being cut yesterday, must have been the fourth crop. Pastures are abundant and some corn husking has begun, altho the country I came thru is not the best corn country. Soybeans are moving quite rapidly now and a couple of weeks of dry weather would see the crop all gathered. The yield is not as good as it was last year; 10 to 15 bus. to the acre will be the average. Last year we had a great many fields yield 30 bus. Price seems to be good and farmers are well pleased.—Goodrich Bros. Co., P. E. Goodrich, Pres.

Decatur, Ill., Oct. 24.—Seeding for fall wheat is about completed, with quite an increased acreage. Soil conditions have been favorable for uniform germination of seed. Wheat that is up shows good stands. Some earlier sown wheat and rye is now being pastured. Seeding of wheat averages a little later than usual. Fall pasture feed situation is greatly improved. Monday and Tuesday were the only days this week when they could harvest soybeans. The better soybean yields are in the eastern half of central Illinois, with yields varying from fair to poor elsewhere. Producers are not offering beans, only as they get them combined. Elevators are anxious to fill their October contracts. Beans arriving show from 13 to 16% moisture, 2 to 8% foreign material and 1 to 9% damage. Quality of beans is such that they need to be dried immediately.—Baldwin Elevator Co.

The Manitoba Pool Elevators, Ltd., at its annual meeting Oct. 17 at Winnipeg, recommended that the government accept wheat in a pool, and issue participation certificates on all wheat delivered.

Corn stored on the farm since 1918 was received recently at Kansas City from near Syracuse, Neb. It graded sample white, 17 per cent damage, selling for \$1.04¼ or 9¼c over December. The grain showed yellowing from age.

Combating Weevil in Beans

By H. H. SHEPARD, Entomologist University of Minnesota

Beans infested by weevils may be treated by placing them in a sack or tight box and applying the carbon disulfide on a sack placed over the beans at the rate of one ounce per bushel of seed.

Carbon disulfide is a reliable means of destroying the weevil. The carbon disulfide can be sprinkled on top the grain or poured on sacks spread on the grain. The bin should be air tight and the temperature around 70 degrees Fahrenheit. The fumigation should be allowed to run from 24 to 36 hours.

If the beans can be stored at winter temperatures the weevils can be prevented from breeding and if the low temperature can be maintained for a long enough time, they will be killed. It is sometimes recommended to store beans mixed with air slaked lime. The lime and beans are put into the bins together, the lime filling the spaces between the beans, thus preventing the development of the weevils. For this purpose one part by weight of lime is used to two parts by weight of beans.

Weevils can be noted by their presence and by dark spots where holes are about to be broken thru. Beans may become infested in the field altho the presence of the weevil seldom becomes evident until after harvest or until after storage near older infested lots of seed. Grubs feed within the bean and after their growth is complete, they cut circular holes in the beans. Thru the holes the adults emerge and continue to breed in the dried beans. By spring a thoro infestation of the stored beans may result.

Carbon disulfide as a fumigant should not be used near buildings where fire hazards exist, such as where materials might be undergoing spontaneous combustion, where motors might throw off sparks, or where there are light fixtures and steam pipes.

Instead of carbon disulfide a mixture of three parts of ethylene dichloride to one of carbon tetrachloride can be used. This mixture is free from fire hazard, and can be purchased on the market. A number of non-inflammable liquid fumigants for treating grain are now on the market and can be used more safely than carbon disulfide.

Glucose from corn now is combined with a phosphate compound in a fertilizer that carries the phosphorus in soluble form to the plant rootlets.

Daily Closing Prices

The daily closing prices for wheat, corn, oats, rye and barley for December delivery at the following markets for the past two weeks have been as follows:

	Option		Oct. 14		Oct. 15		Oct. 16		Oct. 17		Oct. 18		Oct. 19		Oct. 20		Oct. 21		Oct. 22		Oct. 23		Oct. 24		Oct. 25		Oct. 26		Oct. 27	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Chicago	117½	85	116½	115½	116½	115½	115½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½
Winnipeg	112½	...	112½	111½	112½	111½	111½	111½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½	109½
Liverpool*	121½	...	121½	125½	121½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½	124½
Kansas City	116½	79½	115½	111½	111½	114½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½	113½
Minneapolis	131	87½	130½	129½	129½	128½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½	127½
Duluth, durum	136½	...	135½	133½	131½	133½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½	131½
Milwaukee .....	...	85½	116½	115½	116½	115½	115½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½	114½
Chicago	102½	52½	95½	94½	93½	94½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½
Kansas City	104½	53½	97	96½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½	95½
Milwaukee	102½	52½	95½	94½	93½	94½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½	93½
Chicago	46½	26½	41½	41½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½
Winnipeg	48½	...	44½	44½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½	41½
Minneapolis	45½	26½	41½	40½	40½	40½	40	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½	39½
Milwaukee	46	31	41½	41½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½
Chicago	84	55½	83½	82½	82½	81½	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
Minneapolis	80½	61½	79½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½	78½
Winnipeg	72	...	71	69½	69½	69½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½	68½
Duluth .....	...	...	81	80½	80½	80½	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Chicago	77½	38	76½	75½	75½	75½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½	73½
Minneapolis	63½	...	61	60½	60½	59½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½	58½
Chicago	127½	119	122½	122½	120½	120½	121	121½	123½	124½	125	125½	126½	125½	126½	125½	126½	125½	126½	125½	126½	125½	126½	125½	126½	125½	126½	125½	126½	125½

*At daily current rate of exchange.

Grain Movement

Reports on the movement of grain from farm to country elevator and movement from interior points are always welcome.

New York, N. Y.—September receipts of grain were: Wheat 1,222,399 bus., corn 618,824, oats 172,475, rye 1,700, barley 9,000, compared with wheat 1,738,636 bus., corn 20,000, oats 398,336, rye 41,530, in September, 1935. Shipments were: Wheat 1,774,000 bus., compared with 1,415,000 in September, 1935.—Produce Exchange, Dept. of Information and Statistics.

Spokane, Wash., Oct. 18.—Prospects are bright for the 1937 Big Bend wheat crop. Growers have already gotten their 1936 crop off in good shape with a large percentage of the winter wheat already seeded and up. The supply of sub-soil moisture is better than average, so that with only normal winter snowfall, a good 1937 crop may be expected even tho spring rains should be light.

Duluth, Minn.—Grain receipts Oct. 1 to 23, inclusive were: Wheat (domestic) 1,061,085 bus., wheat (in bond) 1,874,796, corn 435, oats 27,779, rye 129,216, barley 674,578, barley (in bond) 1,097,453, flax 129,511. Shipments during the same period were: Wheat (domestic) 3,122,602 bus., corn 90,046, oats 188,356, rye 311,675, barley 553,456, flax 149,595. The movement of grain from the country continues small, with cash supplies offerings on a decidedly light scale. The commission houses are not finding any urgent demand from any source and absorption slow.—F. G. C.

Boston, Mass.—Argentine corn is coming to Boston in quantity. Steamer Haxby arrived from Buenos Aires, Rosario and San Nicolas with 340,000 bus. (8520 tons), largest single cargo of grain ever brot to Boston. The steamer Phaeton arrived with 270,000 bus. Included in cargo of the steamer Coldbrook from Buenos Aires were 441 bags white corn and, in addition, 2240 bags bran and 2240 bags pollards. The steamer Collingsworth, from Buenos Aires, had 100 bags of white corn and 387 bags of feed flour. A shipment of 500 bags of malt came in from Hamburg on the steamer Kellerwald.—L. V. S.

Duluth, Minn.—Since Aug. 1 this year to Oct. 23, inclusive, elevators have lifted 5,692,605 bus. of durum wheat out of boats, as against receipts of only 219,721 bus. in the same period of 1935. Car loadings have been active and heavy, as down state mill owners were urgently in need of supplies in order to work out flour contracts. Elevator durum holdings in bond at the close of business Oct. 23 were reported at 2,772,000 bus. Spring wheat stocks, Canadian importations, stood at 3,005,000 bus. There still remain several weeks left of lake navigation and it is generally well understood that a considerable quantity of Canadian wheat will be arriving for domestic use before the boats are forced to lay up for the winter.—F. G. C.

Ottawa, Ont., Oct. 22.—Canadian wheat, visible supply, including 9,823,227 bus. in rail transit, was reported as 160,695,408 bus. Oct. 16, compared with the revised figure of 162,008,705

Wheat in Interior Elevators

Washington, D. C., Oct. 23.—Stocks of wheat in country mills, elevators, and warehouses as of Oct. 1, amounted to 117,195,000 bus., according to an estimate of the Crop Reporting Board released today. Comparable figures for Oct. 1, 1935 and 1934, are 103,382,000 and 115,819,000 bus., respectively. The increase in stocks over those of last year are more than offset by a decline in farm stocks from 267,972,000 on Oct. 1, 1935, to 227,098,000 bus. on Oct. 1, 1936.

The following table shows estimated stocks of wheat on farms and in interior mills, elevators, and warehouses, on Oct. 1, by classes:

	1934	1935	1936
1000 bu.	1000 bu.	1000 bu.	1000 bu.
Hard red winter...	118,480	102,671	103,765
Soft red winter....	112,579	118,830	106,016
Hard red spring....	54,216	74,857	49,463
Durum	9,493	17,322	10,002
White	64,301	57,674	75,047
Total	359,069	371,354	344,293

bus. for the preceding week and 262,436,197 bus. for the week ending Oct. 18, 1935. The wheat stocks in the elevators in Canada for the week ending Oct. 16 amounted to 139,723,282 bus., compared with 141,013,513 bus. a week ago and 234,713,073 bus. for the corresponding week a year ago. Wheat marketings in the Prairie Provinces for the week ending Oct. 9 amounted to 5,448,641 bus., a decrease of 1,367,602 bus. from the previous week, when 6,818,243 bus. were marketed. During the corresponding week a year ago, the receipts were 16,647,313 bus.—R. H. Coats, Dominion Statistician.

Tung Oil Production Increasing

Growers and handlers of flaxseed and manufacturers of linseed oil are interested in the increasing production of tung oil in the United States, as tung oil answers the same purposes as linseed oil in paint.

The Bureau of the Census in a special report issued Oct. 17 finds that all living grove plantings at the beginning of 1935 approximated 3,632,000 trees as compared with about 351,000 trees early in 1930. Data from the 1935 Census of Agriculture and from supplemental inquiries indicate that the total grove acreage of tung trees at the beginning of 1935 was 40,166 acres. Growth of tung trees was reported on 627 farms in 1935 and on 144 farms in 1930. Some of the plantings were of an experimental nature. The average size of groves in 1935 was about 64 acres, tho some individual plantings contained only a small number of trees, while a few contained several thousand acres.

Commercial plantings have been made in the northern half of Florida, in southern Georgia, and in an area not far inland from the Gulf of Mexico in the states of Alabama, Mississippi, Louisiana, and Texas. The southern and northern limits of tung tree cultivation in these states are now determined principally by temperature and moisture considerations. The first extensive plantings of the tung tree were made in Florida, though Mississippi now occupies first ranking in total plantings, with one-half of the total acreage as compared with one-third for Florida.

The tung oil tree, a comparatively new introduction from foreign sources, bears a nut from which is expressed an oil used in the manufacture of paints, varnishes, and water proofing materials, and which has other varied uses in industry. Tung oil, sometimes called China wood oil, is in favor particularly on account of its quick drying action and its imperviousness to water. Until recent years, domestic requirements were met entirely by importation—but now a part of the supply comes from the domestic production of nuts. Domestic production of tung oil has been delayed somewhat by use of the seed for making new plantings.

Wheat ground by 2,028 reporting mills during the second quarter of 1936 amounted to 109,783,551 bus., as reported by the Bureau of the Census.

Co-operators Should Support the Government the Same as Other Distributors

Clem D. Johnston, chairman of the distribution committee of the Chamber of Commerce of the United States, has prepared a statement given out Oct. 5 by Pres. Harper Sibley expressing the committee's opinion that

"It is improper for governmental agencies to extend preferential treatment by means of tax exemption, financing, or other aid, to consumers' co-operative enterprises, since such enterprises are but another form of competitive force seeking to win the support and patronage of the American consumer.

"The committee believes that consumers' co-operatives should be required to progress on the basis of their own merits."

Buckwheat Millers Meet

The Buckwheat Millers & Shippers Ass'n, now known as the Buckwheat Ass'n, held its annual meeting Sept. 26 at Elmira, N. Y.

Geo. A. Dayton of Towanda, Pa., and P. G. Schumacher of Coshocton, N. Y., were re-elected pres. and sec'y for the ensuing year.

FRANKLIN L. LEWIS, New York, said there would be no buckwheat available for export.

R. L. GILLET, federal state statistician, prepared especially for the meeting a revision of the estimates of buckwheat acreage, the yield per acre and the production from 1866 to 1936, in order to provide comparable data thruout a long series of years.

Previous to 1919, production was fairly constant from decade to decade with production rising from 11,000,000 bus. in 1866 to a peak of 14,472,000 in 1909. The estimate for 1936 of 5,793,000 bus. is slightly over one-third of the production in the peak year of 1909, altho the population has steadily increased.

Crop conditions as estimated by 40 of the 75 present showed that the acreage was 69 per cent and the yield 75.6 per cent as compared with the yield and acreage of 1935. Buckwheat in the province of Quebec was reported as much further advanced than in the United States.

With Canada having about the same acreage this year as last, and with reports indicating that the yields will be about the same, the opinion was expressed by some that this pressure would tend to hold the price down to a figure where it would be advantageous for the feed man to use buckwheat as a ration ingredient instead of distillers' grains or other competing grains.

Cipher Codes

Universal Grain Code: Most complete, up-to-date grain code published. Effects a greater reduction in tolls than any other domestic code. 150 pages, 4½x7 inches. Price, leather, \$3.00; paper, \$1.00.

Robinson Telegraph Cipher Code: Revised with all supplements, for domestic grain business. Leather, \$2.50; cloth, \$2.00.

Dowling's Grain Code for Grain Milling and Produce Trades, 6th edition: Used extensively in Western Canada. 154 pages, 4½x6½ inches. Weight 4 ozs. Price \$3.00.

Millers Telegraphic Cipher: (1936) For the flour feed and grain trades. 167 pages, 3½x6½ inches. Cloth bound. Weight 6 ozs. Price \$2.00.

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Bentley's Complete Phrase Code: Contains nearly 1,000 million combinations, any two of which can be sent as one word. Thru its use a saving of 50% can be effected in cablegrams. 8½x10½ inches. Leather back and corners. \$10.00.

Peerless Grain Code for international grain and feed trades. 300,000 different offers expressed by one half codeword combining Destination, Time of Shipment, Quantity, Quality and Price. 10,000 complete Phrases relate to Export grain trade. Private Supplement contains 3000 blank code words. Price \$85.00.

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All prices are f. o. b. Chicago.

GRAIN & FEED JOURNALS
Consolidated
332 So. La Salle Street CHICAGO, ILL.

An Attractive Elevator Office

The Liberty Grain Ass'n, Rudolph, O., has a commodious new office.

Built at the street end of the company's property the new building clears the driveway to the elevator and the coal bins, allowing much room for traffic, and for faster service to farm and town patrons.

The 13x26 ft. main room of the new office houses the dial and the printomatic device of a new 20 ton Fairbanks dial scale. The pit for the 9x30 ft. deck of this scale was poured integral with the concrete floor and foundation of the 24x28 ft. one-story office structure, to insure all parts staying in line, and to insure accurate weights so long as 20 ton scales will do the job of weighing.

The office is of brick construction, with tile hocking, and steel window casings and frames. Over the concrete floor of each of its three rooms is insulation and wood flooring. Under the roof is more insulation, to make the structure easy to heat, and comfortable during all seasons. Ceilings and walls of each of the rooms are attractively finished in plaster.

At the front of the main office room is a long counter, where books and papers may be spread, and customers' demands quickly served.

In one corner of the structure is a fire-proof bank vault. This storage unit for the books, papers and valuable records of the company was purchased from a defunct bank. The vault door is fitted with tear-gas apparatus. When the vault was removed from the bank building the workmen accidentally set off the tear-gas bomb. Four hours passed before they were able to return to the job of dismantling this unit.

Clark Stimmel manages the Liberty Grain Ass'n interests, which include a 20,000 bu. cribbed grain elevator at Rudolph, and a 20,000 bu. elevator and 10,000 bu. ear corn crib at Portage, a few miles north of Rudolph. The company does a general farm supply business in addition to shipping nearly 400 carloads of wheat, corn, oats and other grains at its two stations annually.

Next year a new seed room will be built at the Rudolph elevator to care for the company's increasing business in farm seeds.

The United States Supreme Court beginning its term Oct. 5 has before it the national labor relations act, the railway labor act of 1934, right of the government to finance competing municipal power plants, the Wheeler-Rayburn public utility act, the revamped Frazier-Lemke farm mortgage act, the securities act, the silver purchase act, the federal communications act, the act empowering the president to transfer the shipping board to the department of commerce and state minimum wage legislation.

Dust Explosion Com'ite Report

The N.F.P.A. com'ite on dust explosion hazards, which has the same personnel as the ASA Sectional Com'ite on Safety Codes for the Prevention of Dust Explosions (Z12) recommended to the National Fire Protection Assn. that the following precautions against dust explosion hazards be taken in plants processing soy beans:

In elevators processing soy beans, the safety code for explosions in grain elevators should be followed.

In plants milling or grinding soy beans or preparing them for processing, the safety code for the prevention of dust explosions in flour and feed mills should be followed.

In soy bean processing plants using the extraction process all possible precautions should be taken to provide for the safe operation of such units because the solvents generally used constitute a fire and explosion hazard.

When hazardous solvents are used consideration should be given to the practicability of installing instruments which will detect the presence of flammable vapors and give warning when the concentration approaches the lower explosive limits.

Subcom'ites are preparing recommendations for the prevention of aluminum and other metallic dust explosions, and a safety code for prevention of dust explosions in sulphur handling, crushing, and pulverizing operations.

New regulations for the installation of power-operated ventilating, air conditioning, dust, stock, and vapor removal systems were recommended to the National Fire Protection Ass'n to supersede the regulations printed by the N.F.P.A., edition of 1935. This edition was approved by the American Standards Ass'n as Fire Protection Code for Blower and Exhaust Systems (Z33-1935). The report of the com'ite was adopted by the N.F.P.A., subject to minor changes to be passed upon by the Board of Directors.

Soybean oil crush during the third quarter produced 44,199,118 pounds of oil according to reports from 30 mills in the United States compared with a production of 19,088,017 pounds of oil by 21 mills in the like quarter of 1936, the Department of Commerce reported Oct. 22.

The Agricultural Adjustment Administration has announced that community meetings at which farmers will consider and make their recommendations for a 1937 agricultural conservation program will be held in the 10 corn belt states of the North Central Region, beginning the week of Sept. 21. The community meetings will be the first step taken by farmers in a general co-operative plan to formulate a 1937 program for their region. The community meetings will be followed by county com'ite meetings in October and State meetings in November and December in order that a definite program may be ready for farmers by the first of the year.

Driveway Observations

BY TRAVELER

THE ERROR of being sold ahead on feeds without adequate protection is well portrayed in the case of a Michigan feed mill. With the corn market jumping daily, sometimes the limit, the grain buyer was frantically searching for local corn to cover the feed sale, advertising in local papers, and, presumably, springing the price to reduce loss. If the sale of feed had been properly hedged with purchase of the corn, either futures or cash, the risk would have been minimized.

* * * * *

A CONSERVATIVE industrialist, a manufacturer of machines for the grain industry, is credited with stating: "This new social security legislation is a great boon to the manufacturers of labor saving machines. If installation of a new machine will eliminate the labor of, say, five men, it also eliminates the payroll tax on those five men, replacing it with something on which depreciation may be assessed to reduce income taxes.

"In the controversy between men and machines the social security act will have the opposite effect from the expected. It helps the machines."

Maybe the Machine Age has only begun.

* * * * *

AN OHIO grain dealer, selling straw to a paper mill in carload lots, observed gradual shrinking of this business until it no longer existed for him. Not satisfied with simple regret at loss of this profitable sideline he went to the mill officials.

"Why," he wanted to know, "don't you buy carloads of straw from me any more?"

"We are not much interested in carloads," was the reply. "We'd rather have our straw come in trucks. Got plenty of it coming to our doors. Look at it before buying. Put it where we want to."

Thereupon the grain dealer went home and made arrangements with a couple of local truckmen to haul straw to the paper mill for him. Soon he was back in the trade doing an active business on straw and extending his operations with the trucks.

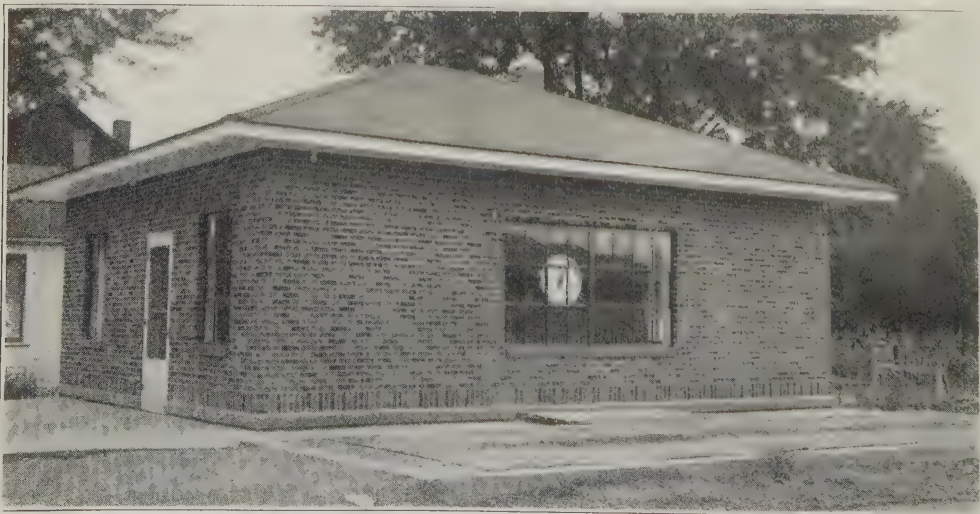
But the use of local truckmen was brief. Not long after he began sending them to this farm and that to pick up purchases of commodities he found the truckmen quoting the farmers a little above his offers and attempting to buy direct on the false claim that they were his partners. The next step was to buy his own trucks.

Today he operates seven trucks of his own, delivering many commodities to nearby markets, hauling back farm supplies for his retail business. "It is nice business," he says. "If I deliver a truckload of hay to a buyer in the southern part of the state I don't have to worry about it being held on a claim of off grade, and suffer unwarranted discounts.

"This summer the local railroad agent said to me, 'We are going to give you a real reason for using the railroad on your straw business next year. We are going to cut the rates.'

"Are you going to haul my straw for 10c a ton?" I asked him. "That's the kind of a rate you'll have to make. It costs 80c a ton to put the straw in a railroad car. The paper mill charges \$1 a ton to take it out. And I can haul all I want from the farm direct to the mill for \$1.90 a ton, with no loading or unloading charges."

All-risk crop insurance has been written from time to time by private insurance companies, the National Industrial Conference Board report points out, but has invariably proved unsuccessful. As the coverage rises to a point that farmers consider worth while the premium rate increases so rapidly that they cannot afford or do not desire to insure.



Attractive Office of Liberty Grain Ass'n, Rudolph, O.

New Elevator on St. Lawrence Route

About one-half of the Canadian grain finding an eastern outlet passes thru the St. Lawrence River to the Atlantic; and while a few small size steamships pass directly from the upper lakes most of the grain is transhipped at some point on the St. Lawrence from canal barges to ocean steamships.

When the haul to the ocean vessel is by rail the boats penetrate as far into the interior as possible, to shorten the most costly rail movement; but on the St. Lawrence River the movement by barge is so inexpensive that the barges can go on down stream to meet the large ocean steamships at any convenient point.

The latest addition to these points of transshipment is Three Rivers, Que., half way between Montreal and Quebec on the broad St. Lawrence, where the Three Rivers Grain & Elevator Co., Ltd., has just completed a 2,000,000-bu. elevator.

The plant comprises a group of 52 storage tanks with cupola above, marine elevating tower, track shed, and belt loading galleries to ships at dock side.

THE STORAGE BINS have a capacity of 34,000 bus. each, and the 36 additional interstice bins have each a capacity of 7,000 bus., erected on a reinforced concrete mattress on top of 3,900 timber piles 60 ft. long, driven with water jet into very resistant sand.

The bins are 116 ft. high, and have bottoms put in later consisting of sloping concrete slabs supported on columns, with some hopper fill and finish to make grain run clear of all parts of bin bottoms. The bin structure is 312 ft., 2 ins. by 96 ft., 2 ins.

The basement floor is the top of foundation mattress. At one end of basement is the reinforced concrete tunnel, 7 ft. square and 220 ft. long connecting the elevator with the marine tower, and housing the 40-in. belt conveying grain 240 feet to the receiving loft leg.

The basement contains also two conveyor belts taking grain spouted from bins to the boots of the two shipping legs.

Above the bins are the bin floor containing two conveyor belts, distributing floor, scale floor, garner floor and top floor. On the scale floor are a receiving Fairbanks Scale of 800 bus. capacity and two shipping Fairbanks scales each of 2,000 bus. capacity. The head house is 25x97 ft.

Electric motors are used for all drives, the connected load being 900 h.p. All motors are totally inclosed or pipe ventilated. Transformers are outside. The switch room including switchboard, static condensers for power factor correction and lighting transformers are located in the basement. Silent chain drives are used on all motors except the three large leg motors which are equipped with helical gear reduction sets. Anti-friction bearings are used on all conveyor belt rolls and in gear reduction sets.

Ventilation was given special attention in the design. Large improved type swing windows light the basement and workhouse. Several ventilating shafts extend from basement to ventilators on roof.

THE MARINE TOWER is a structural steel frame 150 ft. high on a reinforced concrete foundation resting on timber piles. The floors are of concrete and the siding of corrugated iron. The tower is on the St. Lawrence River side of the triangular site. The

marine leg is of the boom crosshead type, suitable for unloading canal barges or ocean ships. The tower is equipped with six clean-up shovels, each with a drum operated by compressed air valves, the drums driven by one motor. The tower unloading capacity is 20,000 bus. per hour.

THE TRACK SHED has a concrete substructure on piles, with structural steel superstructure, corrugated iron siding and concrete roof. It is 21 ft., 5 ins. by 50 ft., containing one track with Canadian Pacific Railway connection. The single pit and two automatic shovels will unload 75 cars daily.

Grain coming from track shed or marine tower to loft leg is elevated to receiving garner, thence dropped to receiving scale of 800 bus. capacity, thence to another garner, thence to two turnheads which distribute the grain to some bins direct or to two conveyor belts on bin floor, reaching all bins by trippers.

For shipment, grain is drawn off from bins, thru spouts, to two basement conveyor belts, thence to two shipping legs, thence to two garner, thence to two shipping scales of 2,000 bus. each, thence to two turnheads, thence to two shipping bins, thence to two conveyor belts on cross gallery, thence to two conveyor belts on main gallery where grain is tripped off into any of five shipping spouts (one for each hold of an average ocean tramp ship).

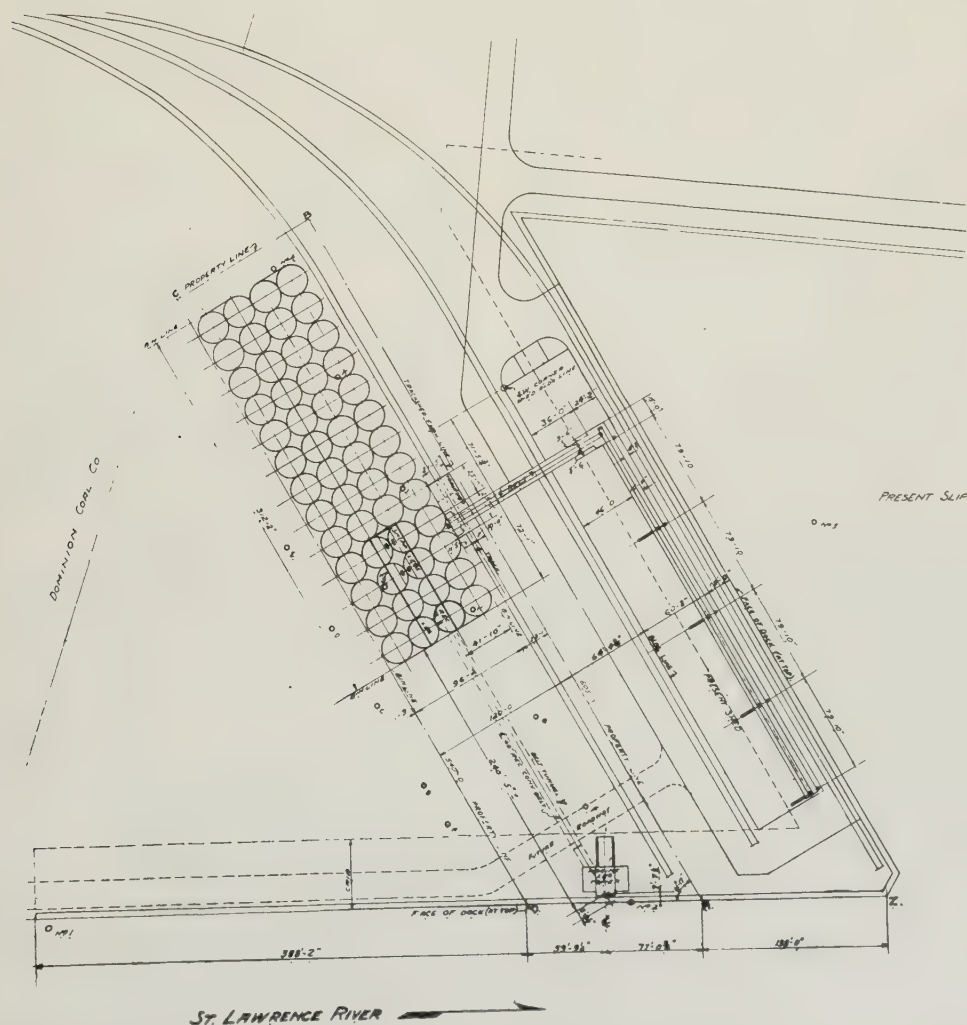
The turnheads under shipping scales also discharge grain to one car spout leading to the trackshed for loading cars. For transfer within the elevator, the shipping turnheads also discharge to the two conveyor belts on the bin floor.

SHIPPING GALLERIES have concrete foundations, structural steel frame, corrugated iron siding and roof and concrete floors. The main shipping gallery was constructed over existing reinforced concrete freight shed, the posts of gallery extending thru shed to separate foundations. The cross gallery is 125 ft. long by 8 ft. wide, the main gallery 335 ft. long by 10 ft. wide. The vessel loading capacity is 40,000 bus. per hour.

The C. D. Howe Co. designed the plant and supervised the construction, while the general contract was held by Carter-Halls-Aldinger Co., Ltd.

The Three Rivers Grain & Elevator Co. is a subsidiary of the Norris Grain Co.

Ground plan is reproduced herewith. Exterior view is shown on outside front cover.



Ground Plan of 2,000,000 bus. Concrete Elevator Recently Completed at Three Rivers, Quebec.
[See Exterior View on Outside Front Cover]

A woman experimenting on soybeans for the German government has produced this year what is called the ideal plant, which contains 18 per cent oil and 35 per cent albumen. It will not be known until 1939 whether this variety is permanent. In the course of the experiments the director has carried out the cross-breeding of some 389,000 types of soy beans.

World supplies of wheat appear to be about 285 million bushels less than last year, notwithstanding recent upward revisions in carryover estimates and are the smallest in 10 years. European supplies, ex-Russia and ex-Danube, are about 210 million bushels less than last year, indicating a substantial increase in import requirements. Domestic shortages of hard red spring and durum wheat have been partially filled by imports of about 12 million bushels duty paid since July 1. Prices probably will remain close enough to an import basis to permit additional purchases from time to time. Light market receipts in relation to current demand probably will continue in North American markets during the next few weeks. Also, limited competition between exporting countries probably will encourage stability in prices. Argentine and Australian crop prospects probably hold the key to any important price change.—Gilbert Gusler, statistician, Millers' National Federation.

The Commodity Exchange Act as It Affects the Grain Trade

By J. M. MEHL, assistant chief, Commodity Exchange Administration, U. S. Department of Agriculture, before the Grain and Feed Dealers National Ass'n, at Milwaukee.

Three suits have been started thus far to enjoin the enforcement of the Commodity Exchange Act, two in Chicago and one in Kansas City. All of these suits have been dismissed in the United States District Courts for want of equity, but are still pending on appeal to higher courts. We do believe that those who worry over what may happen because of regulation should take a day off and give some thought to what could happen to future trading and the exchange system in the absence of regulation. It almost happened in July of 1933, when wheat prices in Chicago crashed nearly 30 cents per bushel within two days and threatened to turn back the forces of economic recovery which had begun to work at that time. Congress was in the mood to make short work of the business of short selling, which surely would have been blamed for that catastrophe, except for one thing. The Grain Futures Administration was able to show that it was not short selling that was responsible for that particular disaster and was in position to counsel corrective regulation rather than abolition.

Some of the boys who are now weeping over the loss of trading in privileges could have gone to Washington in 1933, perhaps, and in a few words explained to Congress just what did happen. However, we think they were rather glad to have us do it for them. In this connection we are reminded that the explanation given by them at the time was that thru the sale of a lot of privileges, which unexpectedly became good, one large speculator had gotten a larger line of grain futures than he could carry and that this caused all the trouble.

Let us not forget that incident too soon. There are many persons scattered thruout the country who still remember it and who will have occasion to remember it for a long time to come. It took the speculative grain markets more than two years to recover from the shock. It brought the volume of future trading down to the lowest level ever known.

The objectives of the law are fairly plain. In the main, they can be described briefly as follows:

To prevent manipulation and corners; to prevent squeezes and congestion in current delivery months, and to prevent the accumulation of excessively large speculative lines, whether manipulative or otherwise, because of their constant threat to market stability.

To prevent dissemination of false and misleading crop and market information to influence prices; to prevent cheating, fraud, and deceit in connection with the execution of customers' orders; to stamp out bucketing in its various forms and to stop commission firms and floor brokers from trading against customers.

To prohibit wash sales, cross trades, and other fictitious transactions, and to stop trading in privileges (puts and calls).

To require futures commission merchants to treat and deal with customers' margin moneys as belonging to such customers and to prevent their use by commission merchants in their own business, or for extending credit to others.

To require registration of futures commission merchants and to require posting of registration certificates in their offices where orders are solicited; to make it unlawful for any person falsely to represent himself to be a member of a contract market or an agent of such member in soliciting orders.

To require the registration of floor brokers executing orders for others.

To require reports from members of exchanges regarding certain market operations and to require their books and records to be open to inspection by authorized representatives of the Government.

Certain obligations are imposed upon contract markets. These in the main have to do with the carrying out of the purposes of the law in general and with the prevention of discrimination against co-operative ass'ns and federal warehouses.

With the right kind of co-operation from the trade, the purposes of the law can be accomplished by practical means and in a way to disturb no legitimate function or practice in future trading. By way of illustration of what has been done in this respect, I point to one or two examples:

When it came to the registration of floor brokers, a question arose as to whether a person executing the orders of his own customers only had to be registered as floor broker. As to floor brokers executing orders for different principals and at the same time trading speculatively for their own account, it was clearly

the intention of the law to enable the Government to know for what commission houses they were acting in executing orders and also the names of firms through whom they were trading for their own personal account. The ideal situation might be to prohibit a broker from trading on his own account, but again there are practical questions to be considered. So the next best thing is to be able to check upon his activities and see that he does not abuse the peculiar position of trust in which he is placed with respect to customers' orders.

If a floor broker trades in the name of one and only one clearing firm, his personal trades, if executed by him, will appear on the books of that one firm. Under such conditions, his employer as well as the Government will be able to check his trades and see whether or not he is taking unfair advantage. Therefore, as to such a one, there is not much purpose in registration, and we sought and found a way to limit registration to those only who in executing orders do so in the name of more than one clearing member.

Offsets.—One provision of the Act prohibits the execution of customers' orders by offsetting buying orders against selling orders. This was aimed at a form of bucketing and was intended to require actual open and competitive execution of all orders in the pit or trading place of an exchange. Those who carried the burden of opposing the legislation before enactment had always contended that this was an entirely unnecessary provision of law, since under exchange rules every order had to be executed in precisely that manner and could be executed no other way. However, when the bill became law and we started holding hearings preliminary to drafting rules and regulations for its enforcement, floor brokers from practically every exchange came forward and told us with complete frankness that not only did they execute orders by offset but that under certain conditions it was rather necessary to do so in order to get fair executions or even to get executions at all. They stated with equal frankness that such executions should take place openly and under conditions which would prevent abuse of the privilege rather than covertly and in technical violation of their own rules.

In the mill feed futures market at St. Louis and Kansas City, where the trading is comparatively narrow and confined to a few firms, it may happen, and has happened, that one firm will receive from different customers orders to buy and orders to sell, perhaps, at the same price. There may be no one else on the floor at the moment who wants to trade in mill feeds or no one who will do so except at considerable advantage in price. Now, of course, a firm having orders to buy and orders to sell from its own customers could lawfully effect execution even in such circumstances by getting the customers' prior consent to become buyer and seller in respect to each of such orders, but this may involve unnecessary delay and telegraphic expense.

The situation has been dealt with satisfactorily, we believe, in "Regulation A" promulgated by the Sec'y of Agriculture last week. This permits a futures commission merchant or floor broker, having buying and selling orders in hand at the same time from different principals for like quantities of the same commodity and future, to execute such orders for and directly between such principals under certain conditions: (1) Such orders must first be offered openly and competitively in the pit or ring in accordance with the written rules of a contract market applying in such cases; (2) failing of acceptance, they may be executed directly between principals at the market price in the presence of an official observer of the exchange; (3) they must be identified by words or symbols on the records made at the time and this record must show the exact time of execution; (4) the exchange itself is required to keep a record of all such transactions.

You will note that under Regulation A just referred to, orders must first be offered openly and competitively in the trading pit or ring in accordance with the written rules of a contract market applying specially in such cases. Here the exchanges themselves are called upon to assume a real responsibility and one much larger than appears on the surface. However, they can better "spell out" the exact method by which such orders shall be offered on the trading floor than we can, and we have left it to them to do so, for the time being at least. In this connection we would respectfully offer these general observations for their guidance:

That the efficient execution of orders at prices satisfactory to both buying and selling cus-

tomers justifies some measure of tolerance in permitting commission firms and floor brokers to execute such orders at like prices as nearly as possible.

Matching Orders.—Too much tolerance will eventually result in either a merely nominal market or no market at all in any real public sense.

Really, the only difference between the indiscriminate matching of customers orders on the exchange floor and in the offices of commission firms is one of geography. It is vastly better that a customer sacrifice a point occasionally than to have a market disappear entirely because of a practice which drives all but a few traders out of the market. This result is inevitable if the business of filling customers' orders by matching tends to concentrate, as it must under the conditions named, in the hands of some person or firm that by reason of the largest flow of orders gains the largest opportunity for matching.

Without mentioning it by name, we know of one market which for many years had been almost a model for fair trading, but where the practice of executing orders by matching grew gradually to such proportions as to seriously threaten its continued existence as a market. In other words, brokers became so efficient in executing orders that they almost did away with their own exchange.

The two instances which I have cited of questions that have thus far been dealt with administratively are somewhat indicative, I believe, of a disposition on our part to be practical-minded as well as fair-minded and to defer to trade views when such views are sound.

Segregation of Margins.—The prohibition in the Commodity Exchange Act against the use of customers' margin moneys by commission firms in their own business, and requiring such funds to be dealt with and treated as belonging to the customers, has been the subject of considerable discussion. The absence of regulations by the Commodity Exchange Administration defining more specifically the duties of commission merchants in respect to such funds has placed a large burden of responsibility on commission firms in having to rely on the advice of their own counsel and their own accountants as to just how best to meet the requirements of the law.

At this point we must pay tribute to the hundreds of commission firms in the grain, cotton and produce trades, who, in the absence of specific directions, have gone ahead on their own responsibility and have worked out some very difficult problems in order to assure compliance with the law. They have not whimpered; they have not complained; some of them have been kind enough to say that in spite of some additional work imposed upon them they like this feature of the law because it has forced them to know more about their own business and more about their customers and has made them keep a closer watch on their margin accounts.

While public hearings were held before the Commodity Exchange Act became fully effective on Sept. 13, no regulations other than those relating to the registration of futures commission merchants and floor brokers were actually promulgated until the law went into effect. We had thought that the various trade interests were entitled to some guidance by way of regulations, particularly on the question of the proper handling of customers' margins. On the other hand, and after the public hearings were concluded, it was strongly urged by substantial trade interests that we make no definite regulations until members of the trade had had an opportunity to experiment in their own way and try to work out for themselves the best method of compliance with this part of the law. We chose the latter course.

The law requires not only margin moneys of customers to be treated and dealt with as belonging to such customers, but also money accruing as the result of contracts and trades. The question immediately arose as to whether or not accruals included so-called "paper profits" and payments received from the clearing house as the result of change in market price from day to day. In the public hearings, lawyers expressed contrary views on the question of whether or not customers' equities, or so-called "paper profits," were to be counted as accruals and segregated the same as original margin moneys and actual realized profits. The vast majority of commission houses apparently adopted the view that customers must be protected with respect to equities as well as original margins, and they proceeded to adjust their accounting procedure accordingly.

The solicitor of the Department of Agriculture, in an opinion given last week, has advised us that under the law, customers' equities in the form of money received from the clearing house must be counted as money belonging to customers and must be segregated and given the same treatment and handling as other margin moneys. He has also advised that a futures commission merchant in depositing customers' moneys must put the depository upon notice as to the nature of the funds, otherwise he is not treating and dealing with such funds as belonging to customers. A number of collateral questions are still pending, but it is ex-

pected that most of these can be resolved in the form of definite rules and regulations in the near future.

I am well aware that some of our friends who have gone to court may make use of the very instances of favorable administrative action which I have mentioned, in an effort to show that the law is so vague and indefinite that the "bureaucrats in Washington" can twist it to mean anything they wish. That is their privilege. It is our privilege to tell you the facts, so that you may judge for yourselves whether it is our purpose to destroy the future trading system or whether we are interested in seeing it strengthened and preserved and made a more useful agency in the business of marketing.

We invite practical suggestions and we want real help. We want to be told when we are wrong and we shall try to remember that as public servants we have no right to be "cross" even when criticized unjustly. We shall welcome your counsel in the drafting of permanent rules and regulations. However, there is one kind of help we do not want and that is the aid of the fellow who labors under the impression that by seeing the right people, pulling the right wires, and spending money in the right way, he can have the law and the regulations cut to fit his own taste. I dare make that statement here because I know that your representation in Washington is not of that kind, and because I believe that the really worth while interests in the grain, cotton, and produce trades realize that what is best for the public interest is in the long run best for them.

I am sure that if members of the trade will accept regulation in the spirit in which it should and will be administered, the effect of the Commodity Exchange Act upon the grain trade as a whole will be wholesome and constructive and that it will provide the means for securing better understanding of and wider public confidence in what, under any circumstances, is a very technical and easily misunderstood process in the machinery of marketing.

The Farm Credit Administration is alleged to be in precarious cash position and will need additional funds from Congress if it is to continue in operation.

Blencoe Elevator Adapts Itself to Large Trucks

Huge trucks daily passing thru Blencoe, Ia., hauling corn, and stopping at the elevators to purchase corn for distant feeders encouraged the Blencoe Farmers Elevator Co. to install a new 20 ton Fairbanks type S truck scale.

Keeping in mind the immense sizes of the trucks in use, the company had the scale fitted with a 34x10 foot concrete deck. No necessity exists for weighing one end of a truck at a time on a platform so long. The platform will accommodate the longest of the trucks or truck-trailer outfits in use, insuring accurate weights. The photo reproduced herewith shows a 478-bu. load of corn, destined to a Kansas cattle feeder, being weighed on the new scale.

Equipped with a type registering beam to point the weights of the trucks on individual scale tickets, the new scale is reported to have increased the company's business with transport trucks by 25%.

Story of the Drouth

By T. R. SHAW, editor Cargill Crop Bulletin, before Grain and Feed Dealers National Ass'n at Milwaukee

Drought, whether it is spelled "d-r-o-u-g-h-t" or "d-r-o-u-t-h," is a very dry subject.

Drouths are nothing new in the history of the world. They have always been with us and will no doubt continue to be with us until the end. They are just one of the many phases of our changeable weather conditions, and no matter what we think, write, or say about it, we cannot tell when nor where drouth will strike, how long it will last, nor do anything to prevent it.

History of Drouths.—Following a series of years with rather abundant rainfall, widespread drouth began in 1886, and while interrupted in 1892 by abundant moisture, there was a marked tendency for subnormal rainfall from 1886 to 1895, culminating in the severe drouth of '94 and '95, the driest years of that period. The year 1896 had fairly good precipitation, but 1897 was deficient in moisture between the Mississippi River and the Rocky Mountains.

Following this general long time drouth, there were several short drouth periods affecting comparatively small areas. In 1901 the interior valleys in the Southwest suffered from drouth, but 1902 had plenty of moisture in most states. Another transitory drouth occurred in 1910, principally in the central and northern states and the South, but this was largely a one-year affair. Another one in 1917 affected the Southwest and northern plains, and still another in 1925 was severe in the South and Southeast. Thus, for some sixty years up to 1930, there were a number of short period drouths, but only one persistent and markedly dry phase, that of 1886 to 1895, lasting in general about ten years. Some years in that period, of course, were better than others.

The present drouth began in 1930 and has continued with a few more normal years, such as 1935. Up to the present time there have been in this series three extremely dry years—1930, 1934 and 1936.

The few available precipitation records covering a hundred years or more indicate that a general dry phase somewhat comparable to that of 1886 to 1895 and the more recent one of 1930 to date, obtained in the 30's of the last century, or approximately one hundred years ago.

The outstanding wet years of the United States for the last century were from about 1865 to 1885, with a secondary maximum during the first two decades of the present century, the several transitory drouths were interspersed. All of these statements refer specifically to that part of the country east of the Rocky Mountains.

Tree ring records confirm these dry and wet cycles and have shown that even in the wet area of the Northwest Pacific Coast states drouth years have been experienced. In the Southwest territory archaeological explorers have found evidence of severe drouths causing famine and death among the Indian tribes of that district hundreds of years ago.

Value of Soil Moisture.—Wet springs following dry falls apparently do not show much better spring grain yields than do dry springs following wet falls. The best wheat and spring grain yields have occurred when both fall and spring periods have above average precipitation; and the poorest yields when both periods were below average.

Snowfall from November to March has been of little value in adding moisture to the soil. Most of it is either taken up by the dry winter air or runs off when melting in the early spring, leaving only a small percentage available for subsoil reserve. It requires 10 to 12 inches of snow to make 1 inch of moisture, so that very little benefit is received from snow except in the irrigated sections where the melting snow from the mountains is stored in reservoirs for future use.

When rainfall has penetrated the soil three or four inches or to a level below the usual depths of plows or cultivators, atmospheric conditions seem unable to deplete the moisture. As the top soil dries it has a tendency to retain the moisture at a lower depth.

A substantial percentage of the rain that falls is quickly evaporated into the atmosphere when it touches the soil, especially when rains are less than a quarter of an inch. This loss from evaporation is one of the important reasons for relatively low yields in crops. Winds are accountable for a substantial percentage of moisture, especially when they come while the moisture is still in the surface soil. Weeds also take a heavy toll of the moisture that would otherwise go to the development of grain.

The average wheat plant does not seem to be injured directly by hot temperatures or dry winds. It has been noted during the past season that under the adverse conditions of heat and dry winds, crops in low spots where subsoil moisture had collected, or crops grown on irrigated land did not suffer so much.

Moisture, therefore, is the most essential element for the fullest development of grain and all vegetation; surface moisture for germinating the seed, and subsoil moisture to carry the plant to maturity.

Summer Fallow.—For these reasons summer fallowed land has proved to be the most advantageous for growing crops, and farmers who have tilled their land thoroly and kept the weeds out during the fallow period have received fair to good crops, even in the dry years. Summer fallowed land has the advantage of receiving moisture during the fall previous to summer fallow and conserves most of the moisture during the fallow year, so has stored up a good supply in the subsoil for the crops sown the following spring.

When wheat is sown in the spring it requires sufficient moisture to germinate, but until the plant is from 4 to 6 inches high it uses comparatively little moisture. From this time on, however, the daily use increases, altho by the end of June the plant generally has used less moisture than the average rainfall. From that time until harvest, however, the use of moisture by the plant proceeds at an incredible rate, utilizing all the moisture the soil has previously stored up. Therefore the necessity of an adequate supply of subsoil moisture.

Root Growth.—Most plants develop a remarkable root growth, sending down many delicate branches into the subsoil. When a plant is pulled from the ground, only the upper roots come with it. The fine, almost invisible mass of tiny root branches remain in the soil.

The roots of the spring wheat plant extend under ordinary conditions to a depth of four to



A 478-bu. load of corn being weighed on the Fairbanks Type S motor truck scale at the Blencoe Farmers Elevator Co.

six feet into the soil. This has been proved by scientists who have had the patience and skill to dig down into the soil and wash all dirt away carefully from the roots. Even with the utmost care many of the finer roots are lost during this process, but from roots actually saved in one excavation these scientists estimated that the number of branches of the first and second order amount to over two million, and, in addition, there was a large number of the third and fourth order branches destroyed, as they were of extremely fine texture. This gives us some idea of the wonderful workings of nature in the earth and illustrates the ability of plants to live and reproduce even under the most adverse circumstances.

Effects of Drouth.—With the completion of another drouth year, we can look back and see the destructive effects of this mighty force of nature.

In 1931 the drouth struck the spring wheat territory, especially North Dakota and Montana, but the corn and winter wheat areas of the country harvested good crops. The following year Kansas was hit hard by the drouth, especially in the so-called "dust bowl" (the territory surrounding southwestern Kansas), but the spring wheat territory came thru with good crops. In 1933 the "dust bowl" was again visited by drouth, which extended into Nebraska and other winter wheat states. It also affected South Dakota and Montana that year.

Due to the dry, bare soil in the drouth areas, dust storms were unusually severe, causing great inconveniences to both man and beast. Insects, especially grasshoppers, thrived and multiplied during the dry periods and destroyed much of the grain and feed that might have been saved.

The 1934 drouth year proved to be the worst so far as grain production was concerned. Altho the winter wheat belt was slightly better than the year before, the spring wheat territory, especially North and South Dakota, suffered severe losses. Corn and other spring sown grains in most parts of the country were affected and we finally harvested the smallest crop of spring grains ever recorded. The drouth of 1934 affected nearly every part of this country and Canada, and many countries of Europe and Asia reported extremely dry conditions.

Fall moisture conditions in the Central states during 1933 were very poor, so the subsoil generally was dry. The expected early spring rains did not materialize in 1934 and spring grain seeding was damaged. With winter feed practically exhausted and very little spring pasturage, cattle suffered severely, and conditions became so serious that the government had to step in and take a hand in shipping out and destroying surplus cattle in the drouth areas. Growing conditions continued to get worse all over the Northwest, even into the Canadian Provinces, and farmers in many sections were obliged to cut and feed the Russian thistles and other weeds, the only vegetation that could grow in the dry areas.

Good rains in September, 1934, insured a fair subsoil moisture supply for the following year, and 1935 was blessed by generous rains during the early spring and a good share of the summer months, so that the crops in 1935 were good in practically all sections of the country. Prospects were unusually bright in the Northwest—then the rust came, and we all know how that terrible scourge wiped out completely millions of acres of the most bountiful prospects the country had seen for years.

Moisture conditions were again very poor in the fall of 1935 and the soil entered the winter in a very dry condition. This drouth continued during the early spring and summer months, accompanied by excessively high temperatures, and 1936 recorded another drouth year with very poor crops. Feed supplies, however, were better than in 1934 and livestock was carried longer, but many sections were obliged to ship to conserve the diminishing supplies.

It is only necessary to read the reports from most of North and South Dakota, Montana, and other parts of the country to realize what farmers are facing—not despondently, but courageously. From all over this once fertile territory came reports—"no crops here, complete failure." This statement alone, coming from so many sections, covers the situation thoroughly. In some places they were able to secure enough for seed.

To visualize the awful destruction that took place this year, compare the government corn production estimates of July 1 and Aug. 1, 1936. Corn for all purposes was estimated at 2,244,834,000 bus., and on Aug. 1, 1,439,135,000 bus.; a loss in one month of 800,000,000 bus. No one can fully realize what this staggering loss means to the citizens of the United States. Other spring grains suffered losses, but not so much proportionately as corn.

The Outlook for 1937.—Rains during the past two months in practically all sections of the country have been very beneficial. Pastures, which were in the poorest condition for many years, revived rapidly and are now supplying much needed green feed for livestock, and helping to conserve the scanty supply of silage, fodder, hay and grain for the winter months. Late corn improved and farmers were able to

secure more grain and seed than they ever expected. Soybeans developed and ripened with the better weather conditions. Sorghums and all late fodder crops made splendid progress. Gardens, trees, and in fact all growing things have responded to the regenerating power of the life-giving rains.

The hard, dry soil was softened and plowing operations started. A large acreage of winter wheat and winter rye was sown and much of it is up to a good stand, insuring good pasture for this fall and early spring, with bright prospects of a good crop next year.

Looking at the situation as a whole, the prospects for 1937 are much better than they were a year ago and are comparable to the fall of 1934.

September Rainfall.—To get a clearer understanding of what this means to the principal grain growing states, we will use the normal precipitation for the month of September as a basis, or 100%, and see how last month compares with normal. The state of Ohio is almost normal, or 99%. Indiana shows 115%, Illinois 144%, Michigan 173%, Wisconsin 146%, Iowa 180%, Missouri 207%, Oklahoma 216%, Kansas 180%, and Nebraska 110%.

The states showing a deficiency in moisture for September, 1936, compared to normal are, Minnesota 66%, South Dakota 47%, North Dakota 57%, and Montana 48%. Altho these figures show a rather small percentage, they are better than September, 1935, but much lower than September, 1934. Comparing these three years, we find Minnesota with 66% this September, 38% last year, and 102% in 1934; South Dakota, 47%, 36% and 153%; North Dakota, 57%, 20% and 55%; Montana, 48%, 18% and 114%, respectively.

This would indicate that the Northwest spring wheat states are facing another poor crop year, as the subsoil moisture is decidedly deficient, but late fall or spring rains can change this picture. The corn and winter wheat states are supplied with an adequate amount of moisture for the present but will require more to replenish the depleted subsoil.

Using precipitation records for a whole state does not give a true picture of actual conditions. For instance, Minnesota may show a normal annual precipitation of 27 inches, which means that some sections in the state would require above normal precipitation to offset the areas where precipitation was deficient. The lake and forest region, where very little grain is raised, usually receives good rains, while the Red River valley, one of the finest grain districts in the country, may get comparatively little, as was the case this year. This same principle applies to all states, some having extremes from north to south, and others from east to west. Western Kansas, for instance, is short of moisture, while eastern Kansas is well supplied. North Dakota is generally dry at present, but the northeast section has received as much as 7 inches of rain this fall.

Official measurements of rainfall do not always mean that the soil has benefited. An inch of rain falling in a short period of time may damage the crops, cause erosion by rapid runoff, and do comparatively little good to the soil; whereas, an inch of rain falling slowly will soak into the soil and do good to all vegetation. Yet both go in the records as an inch of rain.

We cannot say definitely that the drouth is over, but we have an unexplainable feeling, better known as a hunch, that the worst is past and that everything is coming out all right. The moisture situation is decidedly better; farmers are more hopeful; business in practically all lines is improving; even the grain and feed business is picking up. We are on the threshold of a new and brighter era.

Ohio Trade Reviews New Corn

[Concluded from page 339]

Thompson. E. T. Dickey represented the seed trade.

CLEVELAND sent F. E. Watkins, Joe Stryker and J. A. Gage.

SIX SALT men were present, A. C. Arps, C. A. Corns, John G. Gerlack, John S. Jones, Gilbert Martin, and Dan Yount.

BUFFALO'S representatives were T. E. Smith (American Elevator & Grain Division), Bradford Monk (Wood Grain Corp.), E. H. Kinchbaugh (Cargill Grain Co.), John N. Anderson, M. F. Cohn, John W. Mitchell, Edward McClure, Fred E. Pond, and Chas. B. Weydman.

TOLEDO sent D. L. Norby (Cargill Grain Co.), P. M. Barnes, W. A. Boardman, Charles R. Keilholtz, Fred Mayer, A. E. Schultz, L. J. Schuster, "Woody" Woodman, and C. O. Westendorf.

COUNTRY SHIPPERS, interior brokers and feed mill operators were: J. Paul Donley, Ashland; C. O. Wise, Bellevue; Edgar M. Hieber and D. L. Richard, Bloomville; J. H. Motz, Brice; C. B. Earnest and E. C. Eikenberry, Camden; Howard L. Hockman, Canal Winchester; S. P. Robertson, Caledonia; Tom Reed, Centerburg; E. B. Copeland, J. W. Eshelman and R. P. Read, Circleville; Burt Miskimen,

Coshocton; J. S. Comer, Dresden; E. O. Tee-gardin, Duvall; F. B. Griffin, Elida; A. T. Ward, Fostoria; B. C. Calvelage, Fort Jennings;

P. J. Cole, Elvin K. Heily, E. W. Loy, and G. E. O'Brien, Greenville; E. W. Laubis, Hepburn; Bliss Russell, Hilliards; W. O. Loy, Kettlersville; Elton W. Kile, Kileville; R. H. Brundige, Kingston; C. A. Hiegel, Leipsic; C. W. Pontius, Lewisburg; W. M. Myers, Lockbourne; R. K. Shaw, and Farrar Watts, London; E. P. Short and Gus Holland, Marion; H. E. Fredrick, Marysville; Fred W. Duncan, Metamora; H. G. Pollock, Middle Point; W. M. Zollinger, Millersport;

Alfred P. Eier, Nevada; O. J. Chamberlin and O. M. Clark, North Lewisburg; W. G. Guscott, Olmstead Falls; J. B. Hill, Orient; J. W. Simmons, Pemberton; H. R. Wooley, Pickerington; W. C. Youmans, Plain City; A. A. Fleming, Prospect; W. H. Clay, Quincy; S. A. Weimer, Rosewood; Burton Hoaglin, Scott; H. M. Schaeffer, Seven Mile; Carl Wilkinson, Sidney; E. L. Allton, St. Paris; Lewis F. Branstool, Utica; Albert Krebehenn, Vandalia; Fred H. Detjen, Wapakoneta; L. G. Bradstock, Wellington; J. H. Falknor, West Alexandria; John H. Craig, West Liberty; and J. A. Cleaves, Wilmington.

Books Received

THE SOYBEAN interestingly brings up to date information on this increasing crop in the 15-page circular No. 461 of the University of Illinois, Urbana.

EUROPEAN WHEAT PRODUCTION AND CONSUMPTION covers characteristics of European wheats, milling practices, type and quality of wheat required, baking practices, Governmental intervention in behalf of wheat growers, and trends in production and consumption. Bulletin No. 535, U. S. Dept. of Agriculture; price, 15c, and obtainable from the Superintendent of Documents, Washington, D. C.

DUST CONTROL in Grain Handling Plants gives definite instructions on attachment of dust suction to elevator legs, boots, bins, garners, hoppers and belt conveyors, showing also methods of venting scale garners and hoppers, recirculating the air thru a hammer mill fan and an equalizing duct for batch mixer. The material in the booklet is based directly on field experience, and the dust control methods suggested have been tried out in actual operation. The suggestions may be followed with complete assurance that the results will be satisfactory. Copies of the 31-page booklet may be obtained, free of charge, from the Mutual Fire Prevention Bureau, Chicago, Ill.

YEARBOOK OF AGRICULTURE, 1936 is not as in former years a record of progress and statistics, but a comprehensive survey of plant and animal breeding. For each of the major crop and livestock groups the book presents a genetic history, a critical survey of superior strains, a discussion of genetic problems and how to meet them, and an extensive catalogue of what seems to be superior germ plasm. The articles cover corn, the small grains, sugar beets and sugar cane, cotton, flax, tobacco, and the major livestock classes. The 1937 Yearbook will deal with fruits, vegetables, flowers, and miscellaneous organisms of agricultural importance. By the U. S. Dept. of Agriculture; cloth, 1189 pages; Government Printing Office, \$1.25.

ELECTRIC MACHINERY CATECHISM answers the questions of users of electrical equipment who do not have an extensive knowledge of electrical phenomena or terms. The four sections of the book cover simple electric circuits, direct-current generators and motors, alternators and alternating-current motors, and electrical machinery in general. Topics treated are: "What Is Electricity?" "What Is Multipolar Machine?" "What Is Meant by Inductance, Capacitance and Impedance?" "How Does a Synchronous Motor Operate?" "What Are Slip-Ring Motors Used For?" "What Is a Synchronous Converter?" and 138 other questions. Over a hundred drawings, photographs and sectional views show the design of simple machines, the flow and characteristics of electricity, the operation of electrical apparatus, wiring diagrams. An index facilitates use of this book as a handy reference manual. "Electric Machinery Catechism" is a publication that will find wide use among those who purchase, use or specify electrical equipment. It is an excellent condensed electrical "library" all in itself. Journal readers can obtain a copy of this helpful book by writing Fairbanks, Morse & Co., Chicago. Paper, 48 pages, 8½x11.

Grain and Feed Trade News

Reports of new firms, changes, deaths and failures; new elevators, feed mills, improvements, fires, casualties and accidents are solicited.

CALIFORNIA

Hollister, Cal.—Stock of the Farmers Co-op. Exchange, Inc., was destroyed by fire on Oct. 7.

Tulelake, Cal.—An alfalfa meal plant having a capacity of 40 tons is under construction here for the Mealalfa Co.

Merced, Cal.—The James Grain Co., which has operated a grain and milling service in San Jose for 15 years, has opened a branch here, the manager of which is M. L. Benedict. In Merced the company will have a line of poultry feed.

Los Molinos, Cal.—Macy & Co., whose feed mill burned last month, as reported in the Oct. 14 Journals, will build a new plant to replace its loss. Immediately following the fire, the company opened up for business temporarily in a building opposite its former location.

Trowbridge, Cal.—The grain elevator that was partially completed near here a number of years ago and then left standing and unused, was taken over some time ago by the Growers & Millers Grain Co., of Oakland, which completed the structure, repaired the damage done by the weather, and equipped it for operation, installing modern, automatic machinery and running a spur track from the Western Pacific Railway to serve it. The elevator, which has a capacity of 1,800 tons, is now filled with grain.

CANADA

Robinhood, Sask.—The Saskatchewan Wheat Pool Elvtr. and another grain elevator burned Oct. 7; loss, \$35,000. The fire started in the Saskatchewan elevator.

Winnipeg, Man.—After paying operating expenses, the Manitoba Pool Elvtrs., Ltd., had a net surplus of \$348,000, which has been used to pay the regular installment of principal and interest to the government, which amounted to \$203,500, and also to pay \$37,100 on a terminal.

Winnipeg, Man.—New members of the Winnipeg Grain Exchange include Abbott, Proctor & Paine, who have acquired the seven offices formerly conducted by A. J. Wright & Co., of Buffalo, N. Y., which firm was consolidated with Abbott, Proctor & Paine. The latter now has offices in 24 United States cities and two Canadian.

Winnipeg, Man.—We are indebted to Sec'y-Treas. Darby of the Winnipeg Grain Exchange for a copy of the list of members of that exchange as of Oct. 1, 1936. The book also contains contract grades and discounts, a list of the "regular" elevators of Ft. William and Port Arthur, and the dates of the opening of navigation at these two ports from 1880 to the present.

ILLINOIS

Trenton, Ill.—The Trenton Milling Co. sustained wind damage to its plant early this month.

Peoria, Ill.—On Oct. 23 John R. Lofgren began his 50th year as sec'y of the Peoria Board of Trade.

Muncie, Ill.—George Arnold, who also operates an elevator at Oakwood, Ill., has closed the Muncie elevator.

Quaker (Humrick p. o.), Ill.—The Cleveland Grain Co. has installed a new Soweigh Heavy Duty Motor Truck Scale in its elevator here.

Peoria, Ill.—The Farmers National Grain Corp. has moved its office from the Commercial Merchants Bank Bldg. to the Board of Trade Bldg.

Bloomington, Ill.—John William Pobasco, who at one time owned grain elevators in nine different central Illinois towns, died recently at the age of 63 years.

Toluca, Ill.—The Porch Grain Co. has moved its office, raised its drive and installed a new 20-ton 10x34-foot Soweigh Scale.

El Paso, Ill.—The El Paso Elvtr. Co. is building an addition to its elevator on the I. C. tracks, and will move its sheller from the building on the T., P. & W. tracks to the new structure.

Atwood, Ill.—Lawrence Buckner has been made manager of the Atwood Co-op. Grain Co.'s elevator, succeeding Guy W. Robertson, killed in an auto accident recently, as reported in the Oct. 14 Journals.

Woodhull, Ill.—The Woodhull Grain Elvtr. Co. opened its rebuilt west elevator and feed mill this month. George Saathoff has been reconstructing this house since the Woodhull Co.'s other elevator burned last summer.

Wenona, Ill.—Grain dealers of the Streator territory met at the Stanton Hotel, this city, Oct. 22, at 6:30 p. m., at which time dinner was served. The new rules and regulations for warehousing, also the problem of curbing the activities of itinerant truckers, were discussed.

Metamora, Ill.—Waldschmidt & Schneider are remodeling and modernizing their north elevator. An entire new driveway is being built, and a sheller, with a capacity of 1,500 bus. an hour, will be installed. New elevating equipment is also being added. George Saathoff has the contract.

Lawrenceville, Ill.—The Horner Elvtr. & Mill Co.'s elevator was entered by burglars during the night of Oct. 11, who stole about \$20 in cash and several notes and stock certificates. The combination lock was knocked off the safe. Entrance was gained to the building thru a window.

Peoria, Ill.—A meeting of the Illinois division of the Associated Southwest Country Elvtrs. was called by Frank M. Stoll, sec'y-treas., of Kansas City, Mo., the meeting being held at the Pere Marquette Hotel, this city, Oct. 9. Regulations governing truck carriers of grain and feed was the principal topic of discussion.

CHICAGO NOTES

Adolph Kempner has been made manager of the grain department, Lamborn, Hutchings & Co.

Board of Trade memberships are selling at \$4,200, a decline of \$1,000 from the previous price.

Friends of Harold Hensler, Arcady Farms Milling Co. sec'y, will be glad to know that he is making satisfactory progress from an operation recently at Alexian Bros. Hospital, this city.

Wm. P. Anderson died Oct. 23 at the Presbyterian Hospital of a complication of diseases. As a young man he entered the employ of Norton & Worthington as cashier and office manager, later purchasing a membership in the Board of Trade and doing business on his own account as W. P. Anderson & Co., one of his early partners being W. S. Booth. He had not been active in business for the past two years.

A warehouse addition to the plant of Kahn Bros. Hay & Grain Co. is under construction, to be 52x125 feet, one story, and having a capacity of about 350 tons of hay and a number of carloads of feed.

The first meeting of the season of the Grain Market Analysts Club will be held Oct. 29 in the Board of Trade Grill, at 6:30 p. m. The guest star of the evening will be the latest addition to the grain family in this country, the soybean. Austin Sturtevant, member of the permanent com'te on soybeans, will talk on the marketing aspect of this commodity, and a representative of the Glidden Co. will speak on the industrial uses of the soybean.

A petition to place Kenneth S. Templeton in nomination for the presidency of the Chicago Board of Trade is being circulated among members. Mr. Templeton is now first vice-pres. Heretofore nominees were chosen by a nominating com'te, but according to a change in rules approved early this year, nominees for president and also second vice-president are named by petition of at least 40 members. Siebel C. Harris, now second vice-pres., will automatically become first vice-pres. Jan. 1. Robert P. Boylan, pres., will retire at the end of the year to become New York representative of Clement, Curtis & Co. Barnett Faroll is mentioned as a possible choice for second vice-pres.

Margins required by customers on trades in futures were reduced Oct. 20 by the directors of the Board of Trade from 200 to 150 per cent of the clearing house margin, thus rescinding the advance of Aug. 19. Until further notice the initial minimum margins which a member must secure from outsiders on grain futures transactions are 6 cents per bu. on wheat, corn, rye, barley and soy beans, and 3 cents per bu. on oats. Clearing house requirements for members are unchanged at 4 cents on wheat, corn, rye, barley and soybeans and 2 cents on oats. On a hedging transaction, or on spreading transactions between different grains, initial margins are 4 cents per bu. on wheat, corn, rye, barley and soybeans and 2 cents on oats. On a spreading transaction in the same grain no initial margin is required, but customers must keep such transactions at least to the market at all times. After receiving the required initial margin a member of the Board of Trade may use his own discretion in calling for additional margin until the account approaches the point of complete margin exhaustion.

INDIANA

Dayton, Ind.—Wade Fair has been made manager of the Dayton Grain Co.'s elevator here.

Rushville, Ind.—A new corn processing unit is under construction by the Rush County Mills.

Raymond, Ind.—Stafford & Murray were the recent purchasers of a Sidney Special Feed Mixer.

STRATTON GRAIN CO.

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New Paris, Ind.—A new mixer and other equipment is being installed by the Martin Feed Mills.—L.

Kimmel, Ind.—The Stiefel Grain Co. has installed a new Soweigh Heavy Duty Motor Truck Scale.

Warren, Ind.—The Farmers Exchange, Inc., has added to its elevator equipment a new Soweigh Scale.

Johnson, Ind.—Ford Garrett has sold his grain elevator to David Higginbotham and Harold Garrett.

Monroeville, Ind.—New corn chutes have been installed at the elevator of the Monroeville Co-op. Equity Exchange.

Medford (Muncie p. o.), Ind.—Stafford & Murray are remodeling their elevator building and adding a room for feed storage.

Reagan, Ind.—The Lake & Reagan Grain Co. recently installed a new hammer mill and diesel engine in its elevator at this point.

Hawkins (r. d. Connersville), Ind.—The local elevator of the Fowler Grain Dealers, Inc., has been torn down and the material removed.

Tipton, Ind.—The Tipton Milling Co. is installing a hominy mill to add pearl meal and cracked hominy to its line of flour and feeds.

Berne, Ind.—Berne Equity Exchange is now using the R. H. Fan Sheller which it recently purchased from the Sidney Grain Mch. Co.

Indianapolis, Ind.—Recent additions to the membership of the Indiana Grain Dealers Ass'n include the Dunreith Grain Co., Dunreith, Ind.

Corunna, Ind.—The former J. H. Knauer elevator is now owned and operated by the Corunna Feed Mill. Mr. Knauer died several months ago.—L.

Upton (r. f. d. Mt. Vernon), Ind.—The corn and wheat elevator here has been purchased by the Mt. Vernon Milling Co. from the Home Mill & Grain Co.—W. B. C.

Petersburg, Ind.—George T. Frank, 75, for many years owner and operator of the Star Flour Mill, died recently, death being due to a stroke of paralysis.—W. B. C.

Converse, Ind.—The new 30,000-bu. elevator of Goodrich Bros. Co., reported in the Sept. 9 Journals as under construction, replacing the recent fire loss, will be equipped with a Richardson Automatic Scale and a grain cleaner. The Reliance Const. Co. has the contract for building.

South Whitley, Ind.—The Farmers Elvtr. Co. has purchased a Jay Bee Hammer Mill with 15-h.p. motor and will operate same in addition to the large 75-h.p. hammer mill. This will speed up the service and small batches can be served more economically with a small grinder.—L.

Columbia City, Ind.—The Columbia Grain Co. (reported in the Oct. 14 Journals as the name under which Royal Clapp will operate the former Kunberger elevator, which he has purchased) has been incorporated; capital stock, 100 shares, no par value; incorporators: Royal D. Clapp, Daisy N. Wickliffe and Hilda J. Boerger; to deal in grain, feed, coal, fertilizer, building material, hardware, etc.

Crawfordsville, Ind.—Under construction by the Farm Bureau Elevator & Supply Co., is a new concrete and brick, two-story and basement warehouse adjoining the elevator. In this will be installed an enlarged feed department. A new corn cracker and grader and a new and larger feed mixer will be included in the new equipment. Later improvements planned are raising of the elevator leg heads and addition of four bins above the elevator driveway.

Blaine (Portland p. o.), Ind.—Fred Stultz recently installed a Blue Streak Hammer Mill.

Knightsdown, Ind.—While no contracts have been let, the O. C. Shirley elevator, destroyed by fire recently, as reported in the Sept. 23 Journals, is expected to be rebuilt.

Talbot, Ind.—The Farmers Grain Co., Jack Hile manager, has made several improvements to its elevator and office, putting in a new McMillin Truck Dump, resurfacing the driveway and installing new office furniture.—O. P. Larimore, with Cleveland Grain Co. (Indianapolis).

Crawfordsville, Ind.—Between 600 and 700 persons attended the recent grand opening of the new plant of the Gray Agricultural Supply Co. The new incubator, with 30,000-capacity, was on display in the hatchery and was visited by nearly every one present. Attendance prizes, given by each of the supply companies who had representatives present, were given out during the afternoon and evening. The free talking pictures, which proved to be very popular, were shown in both afternoon and evening and included a colored cartoon, a comedy and a feature picture. Harold L. Gray, pres. of the company, received telegrams and good wishes all day from friends who could not be present.

Vincennes, Ind.—On Oct. 10 the Baltic Mills Co. started operating its new corn mill, grinding from this year's corn crop. This was the first the company has ground since the other mill was destroyed by fire on Aug. 4, 1930. The new mill is one of the most modern corn mills in the country and it will manufacture a large number of products, including cornmeal, table grits, brewers' grits and hominy feed. It has what is known as a long system of milling corn, which includes degerminating the corn and drying the products. The new mill has a grinding capacity of 2,000 to 2,500 bus. of corn each 24 hours, and the company has storage facilities for close to 100,000 bus. Orville T. Staub is pres. and Oris H. Wright is sec'y-manager of the company.

IOWA

West Bend, Ia.—The West Bend Elvtr. Co. is erecting a modern service station.

Sloan, Ia.—The Farmers Cereal Co. is having its elevator covered with metal siding.

Alta, Ia.—The Farmers Elvtr. Co. has just completed an addition to its feed and seed house.

Lonerock, Ia.—An overhead drive and loading spout are being installed at the elevator of the Lonerock Exchange.

Cedar Rapids, Ia.—The National Oats Co. is repainting its elevators and making repairs where necessary.—A. T.

New Hampton, Ia.—E. C. Heinmiller, owner and operator of the New Hampton Mill, is remodeling his mill building.

Somers, Ia.—The Somers Elvtr. Co. has just completed a new feed house as an addition to its elevator, for the storage of feed.

Rich Point (Algona p. o.), Ia.—The Rich Point elevator was recently sold at auction to McEnroe Bros., who plan to move it to their farm.

Sheldon, Ia.—O. M. Yount, 72-year-old grain broker, died in the Good Samaritan Hospital on Oct. 20, from a skull fracture received when he fell on the street a few days before, his head striking the sidewalk.

Des Moines, Ia.—Sargent & Co., manufacturers and jobbers of steer and dairy cattle feed, have appointed T. S. Owen sales manager in charge of sales and research work.—Art Torkelson, with Lamson Bros. & Co.

Ft. Dodge, Ia.—The Farmers Grain Dealers Ass'n of Iowa, with the co-operation of the Iowa State College at Ames, held the last of a series of educational meetings for elevator managers at this city on Oct. 9, at the Hotel Warden.

Strawberry Point, Ia.—L. H. Oldfather & Son are building a 24x24 addition to their feed mill, which will have a cement foundation and the siding will be of hollow tile. The firm has needed more room for its business for some time.

Kelley, Ia.—Sherman Crabtree, former manager of the Farmers Elvtr. Co.'s elevator at Sheldahl, Ia., has been appointed manager of the Kelley Grain Co.'s elevator, succeeding M. A. Kitchen, whose death was reported in the Oct. 14 Journals.

Clemons, Ia.—O. L. Krink, of Sheffield, and B. O. Sweet, of Thornton, have purchased the Farmers' Co-op. Co.'s Elevator here. The new firm will be known as the Clemons Grain & Lbr. Co. Mr. Sweet will be the manager.

Adair, Ia.—Hal Hansen, who is in the elevator business at Exira, Ia., has bot William Wheeler's elevator here and will do some remodeling. He has had 60 tons of gravel spread on the driveways. Mr. Hansen's son will manage the Adair elevator.

Garnavillo, Ia.—V. Brandt is erecting an up-to-date feed mill here, which is expected to begin operations early in November. The building is 64x28 feet, with storeroom for feeds and mill room. A diesel engine will furnish the power for the machinery.

Luther, Ia.—The Farmers Co-op. Elvtr. Co.'s elevator was entered by thieves during the night of Oct. 9, who broke into the safe, littered the floor with papers, but obtained nothing of value. This is the fourth time in the last two years that the elevator has been entered.

Hubbard, Ia.—Harold Bell has been appointed manager of the Farmers Elvtr. Co.'s elevator, succeeding Frank Hoskins, resigned, as reported in the Oct. 14 Journals. For the past five years Mr. Bell has been employed at the Farmers Elvtr. Co.'s elevator at Storm Lake, Iowa.

Reasnor, Ia.—The 60-year-old elevator here, operated for many years by the Denniston & Partridge Co., is being torn down. The decision of the Interstate Commerce Commission to allow abandonment of the Newton-Reasnor railroad branch is responsible for the elevator being razed.

Varina, Ia.—Two elevators here were broken into during the night of Oct. 9, but only about \$3 was taken. At W. G. Daugherty's elevator, entrance was gained by breaking the glass in the front door, and the safe was pried open. At George Schissel's elevator, entrance was gained thru a window.

Sheldahl, Ia.—John Graeber, former assistant manager of the Farmers Elvtr. Co.'s elevator here, has been appointed manager, succeeding Sherman Crabtree, manager for the past 18 years, who resigned recently to take a similar position at Kelley, Ia. Ralph Soderstrom is assisting Mr. Graeber.

Newton, Ia.—D. J. Eberhart has just entered his 59th year as a grain and coal dealer here, and altho he is almost 84 years of age he can be seen at his desk each day, still guiding the affairs of his business. He once operated the only elevator in Jasper County, and is reported to be the longest continuous shipper on the Rock Island lines.—Art Torkelson.

Sioux City, Ia.—C. C. Flanley has been re-elected pres. of the Sioux City Grain Exchange, J. C. Mullaney vice-pres., J. S. Eales treas. and Freeman Bradford sec'y. On the board of directors, S. A. McMaster was chosen to succeed Paul A. Ketels and S. P. Mason was re-elected. Holdover members of the board of directors are: C. C. Flanley, J. C. Mullaney, J. S. Eales, A. D. Doherty and John Wacek.—Art Torkelson.

KANSAS

Everest, Kan.—The Geiger Elvtr. Co. has installed a new hammer mill.

Claffin, Kan.—Complete electrical power has been installed by the Claffin Flour Mills.

Dresden, Kan.—The Robinson Elvtr. Co. sustained damage to its elevator in a wind storm this month.

Kansas City, Kan.—The Ismert-Hincke Milling Co. sustained damage to its electrical equipment recently.

Atchison, Kan.—A cornmeal plant is being installed by the Blair Elvtr. Corp., which expects to have it ready to operate some time in December.

Douglass, Kan.—L. D. Brandt has installed a molasses feed mixer at his elevator, and in the basement a tank having a capacity of one and a quarter carloads of molasses.

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ROSENBAUM BROTHERS

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CHICAGO — OMAHA

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Glasco, Kan.—The Glasco Milling Co. has completed installation of machinery for manufacturing poultry pellets, and has also installed a two-cylinder diesel engine for power.

Alida, Kan.—J. R. Meister, 48 years of age, who had been manager of the Alida Co-op. Elvtr. Co.'s elevator for 15 years, died Sept. 28. Mr. Meister was born and reared in this community.

Arkansas City, Kan.—The Missouri-Pacific Feed & Elvtr. Co.'s plant has been bot by Lloyd McEwen, of the local McEwen Produce Co., who will do a general elevator and feed business at his new location, also continuing operation of his other business. The Missouri-Pacific Co.'s elevator has been in the Probst family for many years. John Probst, who is a son of the late H. F. Probst, who started the elevator many years ago, sold the property to Mr. McEwen. Mr. Probst's home is in Long Beach, Cal.

Dodge City, Kan.—The following have recently become members of the Kansas Grain Dealers Ass'n, making a total addition of 171 new members during the past four months: Winifred Farmers Co-op. Ass'n, Winifred; Forst Grain Co., Frankfort; Huron Grain Co., Huron; Hegarty Grain Co., Effingham; Snyder Coal & Grain Co., Effingham; Clare Grain Co., Olathe; Geo. E. Gano Grain Co., Hutchinson; Sedgwick Alfalfa Mills, Sedgwick; Smith-McLinden Grain Co., Wichita; Commerce Milling & Elvtr. Co., Wichita; S. & S. Sales Co., Wichita; Harold Wallis Grain Co., Wichita; G. J. Brown Grain Co., Sterling; Farmers Co-op. Union, Sterling; Haysville Elvtr. & Supply Co., Haysville; Buhler Mill & Elvtr. Co., Buhler; Ogren-Roach Feed & Seed Co., Hutchinson; Young & Sons Co., Hutchinson; Brada Grain & Supply Co., Hutchinson; Whalen Grain Co., Hutchinson; C. D. Jennings, Hutchinson; Smoot Grain Co., Hutchinson; Salina Terminal Elvtr., Salina.

KENTUCKY

Bardstown, Ky.—Fairfield Distillery Co. was the recent purchaser of four elevators, motors, a cleaner and other equipment, all material furnished by the Sidney Grain Mch. Co.

Louisville, Ky.—H. K. "Ted" Blandford, pres. of Oscar Farmer & Sons, hay, grain and feed dealers, and pres. of the Male High School Alumni Ass'n, is a candidate for membership on the Board of Education.—A. W. W.

Louisville, Ky.—A bid of \$1,500, plus assumption of first and second mortgages and 1937 taxes, filed by George E. Hays of the Louisville Seed Co. for the Kentucky Feed Mills, Inc., has been approved by Nat C. Cureton, sitting as special master in re-organization proceedings. The total amount involves between \$25,000 and \$30,000.—A. W. W.

MICHIGAN

Hastings, Mich.—The Farm Bureau Services have installed a horizontal sawtooth crusher.

Grand Blanc, Mich.—Grand Blanc Co-op. Co. has purchased a No. 3 mixer and a 5-h.p. fully-enclosed motor.

Bay City, Mich.—Consolidated Grain Corp. recently bot an ear corn crusher from the Sidney Grain Mch. Co.

Warren, Mich.—The Warren Co-op. Co. recently installed a corn cutter and grader driven by a 3-h.p. motor.

Eaton Rapids, Mich.—The Long Bean & Grain Co. recently installed a seed cleaner powered by a 5-h.p. motor.

Mt. Pleasant, Mich.—The Farm Bureau Services purchased a model B corn sheller and a 5-h.p. motor recently.

Henderson, Mich.—The Henderson Co-op. Co. installed a 15-ton Fairbanks Truck Scale. Leon Harpham, formerly of Vassar, is the new manager of the elevator.

Freeport, Mich.—The C. H. Runciman Elvtr. has added poultry as a side line, and will also sell poultry feeds.

Chesaning, Mich.—Manuel Foess, who operates a machine shop, has added the Doane elevator to his business.

Vernon, Mich.—The Vernon Elvtr. Co. has installed a 5-h.p. motor in its west elevator to replace the gasoline engine power.

Howell, Mich.—An electro-magnetic Jacobson Separator has been installed ahead of the grinder at the Peavy Feed Mill to remove the tramp iron from the feed.

Ruth, Mich.—We have not bot the Charles P. Cook elevator at Ruth. We have leased it on a month to month basis.—Michigan Elvtr. Exchange (Lansing, Mich.).

Columbiaville, Mich.—The Frutchey Bean Co., Saginaw, has taken over the operation of the Folsom Mercantile Co.'s plant, and has installed a one-ton Sidney Kwik-Mix Feed Mixer.

Montgomery, Mich.—A Blue Streak, Jr., Corn Cutter and a 3-h.p. fully-enclosed motor have recently been added to the equipment of the new feed mill just completed by the Tri-State Co-op. Ass'n.

Saginaw, Mich.—The Farm Bureau Service Store has installed an improved three-roll Nickle Crusher-Feeder ahead of its hammer mill. This machine proportions ear corn and small grain automatically.

Central Lake, Mich.—The Grand Traverse Milling Co., of Traverse City, has installed a bean cleaning outfit in a building here which it has leased. C. W. Hastings has been made manager of the local branch.

Augusta, Mich.—The Knappen Co. has installed lightning rods on its entire milling plant, including the new concrete grain storage tanks which have recently been completed, as reported in the Sept. 9 Journals.

Union City, Mich.—A feed mixer driven by a 2-h.p., fully-enclosed motor has recently been installed in the Union City Milling Co.'s plant. Extensions have also been made to the lightning rod system to completely protect the entire plant from lightning.

Middleton, Mich.—Thieves broke into the elevator of the Farmers Elvtr. Co. Sunday night, Oct. 11, gaining entrance by breaking the glass in one of the office windows. They took 13 bus. of clover seed and left all the office doors and the elevator door wide open.

Cedar Springs, Mich.—An electro-magnetic separator has recently been installed ahead of the grinder in the Lloyd E. Smith feed mill. The entire electric power equipment has been overhauled and a number of automatic starting switches for motors installed.

Owendale, Mich.—The Michigan Bean Co. has installed a corn sheller and a Blue Streak Hammer Mill with a built-in electro-magnetic separator and a direct-connected, 20-h.p., fully-enclosed motor, in its new feed room, reported in the Aug. 12 Journals as under construction.

Chesaning, Mich.—The Michigan Bean Co. has added to its equipment a larger size Blue Streak Hammer Mill with a built-in electro-magnetic separator and a direct-connected, 30-h.p., fully-enclosed motor. It has also installed another main elevator leg, necessitating the addition of another cupola.

Bay City, Mich.—The report that the American Malting Co. is erecting an elevator and malt plant at Bay City is in error. A. R. Moore, pres. of the malting company, writes: "We have no plant at Bay City, neither are we constructing one. The only plant of the American Malting Co. is located in Detroit, Mich."

Lake Odessa, Mich.—George Smith, a prominent business man of this place and a member of the Smith Bros. & Vette Co., which operates a number of elevators in this and surrounding towns, died at the Lake Odessa Hospital Oct. 3, from pneumonia. Mr. Smith, who was 72 years of age, started in the elevator business in 1891.

Milford, Mich.—The Mil-Ford Food Products Co. expects soon to begin the manufacture of cereal products here, in the former Schleider factory, which the former company purchased about a year ago and has been enlarging and modernizing. In addition to the machinery for the mill proper, equipment will include a cleaning machine, automatic scales, magnetic separator, elevating machinery, distributing conveyors, etc., all of which has been purchased.

MINNESOTA

St. Patrick (New Prague p. o.), Minn.—A new feed mill is being erected here by Cihlar Bros.

Duluth, Minn.—At the special election held by the Duluth Board of Trade Oct. 23, W. W. Bradbury was named as a director to fill out the unexpired term of the late J. A. MacInnes.—F. G. C.

Duluth, Minn.—Ervin H. Schumacher, cash grain buyer for the Globe Elevator Co., who has been stationed at Minneapolis for the past several months assisting in the floor work there, returned home last week to stay.—F. G. C.

Dodge Center, Minn.—About \$15 in cash was obtained by burglars from the cash drawer of the Dodge Center Elvtr. Co. during the early morning hours of Oct. 6. The intruders gained entrance by climbing in a basement window.

Glenwood, Minn.—The Glenwood Farmers Elvtr. Co. will replace its recent fire loss, reported in the Sept. 9 Journals, having given the contract to the T. E. Ibberson Co. for the construction of a new elevator.

Garfield, Minn.—The Farmers Elvtr. Co. has awarded contract to the Hogenson Const. Co. for the erection of a 9,000-bu. elevator, of frame construction, replacing its recent fire loss. The new house will be completed by Nov. 10.

Hardwick, Minn.—The Farmers Elvtr. Co. is modernizing its plant with the addition of a direct-connected geared Clow-Winter Head Drive and Fairbanks-Morse Motor, purchased thru Ed Mueller, of R. R. Howell & Co.

Lake Park, Minn.—The old Zenith Mill is being razed, the machinery, which has been idle for years, having been moved out. A smaller building will be erected to house the feed mill, which has continued in operation.

Minneapolis, Minn.—Clark Hempstead, vice-pres. and sec'y of the Pillsbury Flour Mills Co., has been made pres. of the company, succeeding the late H. H. Whiting. E. H. Mirick, head of the grain purchasing department and a director, was elected a vice-pres.

Minneapolis, Minn.—A change was made in the time of broadcasting the close on the futures and cash grain market by radio station WCCO on Oct. 12, from 1:10 p. m. to 2:05 p. m.; otherwise there is no change from the schedule as given in the Oct. 14 Journals.

Stephen, Minn.—The Farmers Grain Co. is making repairs on its elevator. Improvements will include a new boot pan, sectional steel dump grates, new 12-inch, 4-ply Atlas rubber elevator belting and 11x6 Minneapolis "V" Cups, all supplied by R. R. Howell & Co.

Minneapolis, Minn.—Edward P. Wells, former pres. of the Electric Steel Elvtr. Co., this city, and the American Terminal & Warehouse Co., Buffalo, N. Y., which positions he resigned when he retired in 1922, died at his home in this city Oct. 7, at the age of 88 years. At the time of his death he was chairman of the board of the Russell-Miller Milling Co., which he re-organized in 1897, and of which he was pres. for many years.

Duluth, Minn.—Pulling out of active mill participation in the cash durum market left a gap which knocked the bottom wide open, resulting in slashing top premiums on the price range as much as 11 cents in several days last week, before the slump was checked and market tone steadied. The shortage in our domestic durum wheat crop seems to have been discounted temporarily but not entirely lost sight of by the liberal importation of Canadian supplies to fill the deficiency.—F. G. C.

Springfield, Minn.—The 600-barrel flour mill and the 40-ton mixed feed plant of the Springfield Milling Co., which ceased milling operations a short time ago, have been bot by a new company, to be known as the Springfield Milling Corp., which will operate the plant. The new company is composed of L. S. Gregory, of Minneapolis, pres.; Julius Rieck (pres. of the former company and connected with the mill for many years), vice-pres. and general manager; Ralph C. Sowle, treas., and M. W. Sowle, sec'y.

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MISSOURI

Moberly, Mo.—Noel Feed-Produced recently purchased a Sidney Special Mixer from the Sidney Grain Mch. Co.

St. Louis, Mo.—After an association with the Ballard-Messmore Grain Co. covering a period of 16 years, Sylvester L. Fisher is leaving this city for Cincinnati, where he will be with the Schenley Products Corp.

Kansas City, Mo.—A grain futures and general merchandising business will be done by the Stewart Grain Co., which has been formed here by George and A. W. Stewart, formerly with Goffe & Carkener, Inc. The new firm will maintain offices in the Board of Trade Bldg.

Kansas City, Mo.—H. E. Witham and Roy O. McKenna have been made vice-presidents of the Farmers National Warehouse Corp. and both have made application to the local Board of Trade for change of representation. Mr. Witham was vice-pres. and general manager of the Farmers National Grain Corp. here.

MONTANA

Kalispell, Mont.—Options on the Jessup Flouring Mill near here have been purchased by the Great Northern Railway, James T. Mitchell, representative. The mill site includes 65 acres, water rights and mill pond.—F. K. H.

Williams, Mont.—Two grain elevators, the Montana Central and the Rocky Mountain, were burned at about midnight, Oct. 6, together with about 40,000 bus. of grain; loss, approximately \$75,000. Both elevators carried insurance, and it is expected that they will be rebuilt, tho no definite plans had been announced at last report.

NEBRASKA

Carleton, Neb.—The Shannon Grain Co. is installing a hammer mill at its elevator.

Valley, Neb.—A feed manufacturing business is being established here by James Allen and his sons.

Bellwood, Neb.—The Golden West Grain Co. sustained damage to its electrical equipment recently.

Schuyler, Neb.—The Schuyler Milling Co. has completed its plant here, which it moved from Howells, as reported some time ago.

Palisade, Neb.—Krotter & Ward, J. M. Ward, proprietor, are completing the erection of new coal shed of seven-car capacity.—Frank M. Ward.

Odell, Neb.—We are overhauling our elevator, putting in new bin bottoms and adding a large feed warehouse. We will handle as a side line all kinds of feed and flour.—Odell Farmers Elvtr. Co.

Omaha, Neb.—The Farmers Terminal Elvtr. Co. has bot a 19,280-acre ranch in Cherry County, including 2,000 head of Hereford cattle and 120 horses. The elevator company plans to operate the ranch.

Cozad, Neb.—The Denver Alfalfa Milling Co. paid its men, who had been working for it a year or more, a bonus the first of this month, some of the men getting more than \$50 in addition to their regular pay.

Omaha, Neb.—Fifty Nebraska members of the Associated Southwest Country Elvtrs. met in this city on Oct. 15, the main topic of discussion being the itinerant trucker. W. R. Scott, of Kansas City, executive vice-pres. of the organization, was the principal speaker.

Irvington, Neb.—Alvin Seefus, of Walthill, Neb., was haled into court recently, charged with issuing an insufficient funds check to Albert Erikson, proprietor of the Irvington Feed Mill, from whom he is alleged to have bot more than \$500 worth of corn, paying for it by check at \$1.14 a bu., and disposing of it in "roadside sales" at \$1 a bu.

Norman, Neb.—The Norman Grain Co., Carl Friedemann, proprietor, is the successor to the Farmers Union Co-op. Grain & Supply Co. here. Mr. Friedemann will continue as manager of the Beaver Valley Milling Co., Herndon, Kan., at present. John Peterson will manage the elevator at Norman.—Frank M. Ward, with Hart-Bartlett-Sturtevant Grain Co.

NEW ENGLAND

Boston, Mass.—Cereal manufacture that was to begin in a plant purchased for the purpose in Clinton, near Boston, but which was delayed by the British Government requirement that all machinery makers in that country cease work on private orders and devote attention to output of munitions, is expected to begin about Jan. 1. The machinery is on order in England. The building purchased is being prepared for work. New floors are being laid, the entire interior is being painted, and ovens are being built.—L. V. S.

Boston, Mass.—The first grain of any consequence to be stored in Boston elevators this season is Argentine corn, now being imported here in some volume. Grain & Flour Exchange figures show 135,873 bus. Argentine corn and 6,512 bus. Canadian oats to be in Boston elevators as of Oct. 1. But feeds are coming here from Buenos Aires too, the steamer Capilla bringing 2,240 bags of pollards recently. Other imports at Boston include malt, the steamer Chemnitz having 2,597 bags from Hamburg and the Black Condor 1,113 bags from Antwerp.—L. V. S.

NEW YORK

New York, N. Y.—H. J. Underhill, recently retired, a member of the Produce Exchange, died recently at the age of 77 years.

Troy, N. Y.—A grain conveyor at the Upper Hudson Rye Flour Mills, Inc., was wrecked and the interior of the fourth floor of the building was damaged following an explosion and fire in a dust collector, early this month.

Little Valley, N. Y.—The new feed plant of the James H. Gray Milling Co., which was described in detail in the Sept. 9 Journals, was completed early this month and put into full operation. The storage capacity of the mill is 18,000 bus. of bulk feed and about 1,000 tons of sacked feed. The most up-to-date equipment has been installed thruout the plant.

NORTH DAKOTA

Stanton, N. D.—J. R. Montgomery, of Tappen, N. D., has been appointed manager of the Powers Elvtr. Co.'s elevator at this point.

Hatton, N. D.—A new flour mill has been opened by the Ulberg Milling Co. at the farm located 12 miles west and three miles north of this place. The new enterprise will be operated by C. T., Thor and Gilmore Ulberg.

OHIO

LaRue, O.—S. F. Weist has added a large Sidney Kwik-Mix Feed Mixer to his elevator equipment.

Miller City, O.—C. A. Heigel & Sons have installed an electric McMillin Truck Hoist in their local elevator.

Belmore, O.—W. H. Hill, of Oakwood, has leased the Belmore elevator of W. E. Mathias and has taken possession. Mr. Hill has been in the grain business for many years.

Milledgeville, O.—W. D. Rapp & Son recently installed in their elevator a hammer mill, hammer mill feeder, dust collector and other equipment, furnished by the Sidney Grain Mch. Co.

Mechanicsburg, O.—The elevator equipment of the Mechanicsburg Co-op. Exchange has been improved by the installation of an electric truck hoist, manufactured by the Sidney Grain Mch. Co.

Cincinnati, O.—Sylvester L. Fisher will be in charge of grain purchases and the sale of by-products for the Schenley Products Corp. He comes from St. Louis, where he was with the Ballard-Messmore Co. 16 years.

Kettlersville, O.—The Kettlersville Grain Co. is digging a basement under its feed room preparatory to installing a new and larger hammer mill. A new 1½-ton Sidney Kwik-Mix Vertical Mixer will also be installed to replace the ½-ton mixer now in use.

Leipsic, O.—C. A. Heigel & Sons have installed a new 20-ton Howe Truck Scale with 30-foot platform, and have rebuilt the driveway, strengthening it with three 12-inch I beams, putting in new dumps and a traveling electric McMillin Truck Hoist.

Paulding, O.—The Paulding Equity Exchange Co. will install a Jay Bee Hammer Mill having a capacity of four tons per hour, a one-ton feed mixer and a sheller. This new grinding and mixing equipment will bring the horsepower of the motors used up to 100.

Ashland, O.—Cliff S. Martin & Co., one of whose hay storage buildings burned in September, as reported in the Oct. 14 Journals, have started construction of a new building, to be steel clad and to have a storage capacity of 45 carloads. Another similar building will be erected in the spring, also.

OKLAHOMA

Ardmore, Okla.—The Ardmore Milling Co.'s plant was damaged by wind recently.

Oklahoma City, Okla.—The mill plant of the Hardeman-King Co. was damaged by an exposure fire on Oct. 6.

Nardin, Okla.—The Commander-Larabee Milling Co.'s elevator and stock were destroyed by fire at 5:30 p. m. on Oct. 16.

Vinita, Okla.—Five new grain bins have been added to the Baxter Milling Co.'s elevator, increasing the capacity by 2,000 bus.

Waynoka, Okla.—Braught & Braught Grain Co., incorporated; capital stock, \$10,000; incorporators: J. O. Braught, Kate Braught, Alma R. Harkleroad.

PACIFIC NORTHWEST

Heppner, Ore.—The Eastern Oregon Wheat League will hold its annual meeting here on Dec. 4 and 5.

Klamath Falls, Ore.—An alfalfa meal plant is under construction here for the Mealalfa Co., of Dixon, Cal., machinery for which has been purchased.

Colfax, Wash.—William Sutherland, manager of the Balfour-Guthrie Grain Co. here, moved his office to a new location in the modern office building recently renovated.

Astoria, Ore.—The Pillsbury Flour Mills Co. has resumed operation of its local plant, following settlement of labor difficulties resulting from the recent Minneapolis strike.

Jerita (Lacrosse p. o.), Wash.—The grain warehouse of the Pacific Coast Elvtr. Co. burned at 2 a. m., Oct. 13; loss, estimated at over \$25,000, including 10,000 sacks of wheat.

Portland, Ore.—Millard Meyer, statistician of the local Merchants Exchange, is reported to be recovering nicely from a recent operation, but will not be able to take up his duties for a while yet.

Portland, Ore.—The Harvest Feed Co. is a new business here which expects to make its bow to the public about the first of the year. Jim Howarth, formerly with the Sperry Flour Co., this city, has leased a building in which he will install grinding and mixing machinery.

Bellingham, Wash.—Plans for the grain elevator to be built by the Port of Bellingham at the Municipal Dock and to be leased to the Washington Co-op. Egg & Poultry Ass'n, as reported in the July 8 Journals, have been completed and work on the construction is ready to start.

Seattle, Wash.—R. T. Lord, retired official of the Seattle Grain Co., died earlier this month, at the age of 66 years. Mr. Lord was well known in Spokane, also, having lived there as superintendent of the Seattle Grain Co. until 15 years ago, when he moved to Seattle as general manager of the company. Masonic services were conducted at the Riverside Mausoleum on Oct. 13.

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Cottonwood, Ida.—The frame flour mill and elevator of the Cottonwood Elvtr. Co. burned Oct. 14, with an estimated loss of \$40,000; fully insured. During a severe thunder storm, lightning struck the mill, which was soon a mass of flames, and the adjacent warehouse containing 5,000 sacks of grain, also burned. The concrete elevator was saved, tho somewhat damaged by exposure.—F. K. H.

Almira, Wash.—The Almira Trading Co., which operated an elevator, warehouse and feed business here for years, until it leased its property to the Sperry Flour Co. a few months ago, will not be thrown into receivership, as requested by Martha Blinn and Jens Peterson, as reported in the Sept. 23 Journals. Judge Nevins' decision was that there was no evidence of fraudulent mismanagement of the company's business.

Seattle, Wash.—In co-operation with officials of the state department of agriculture, and representatives of the groups affiliated with the Agricultural Trades Council, attorney Thomas A. Williams is working on a redraft of the Commission Merchants law. A meeting to discuss the proposed new legislation in detail will be held late this month. A meeting of the legislative com'te of the Pacific Northwest Feed Ass'n has been deferred until after that time so that completed proposals from both this group and the feed control com'te may be prepared.

PENNSYLVANIA

Mercer, Pa.—J. H. McWhirter has purchased a Nickle Hammer Mill Feeder.

Meadville, Pa.—G. A. Freyermuth, Fredonia, Pa., has purchased a Nickle Ear Corn Crusher for his plant at this point.

Telford, Pa.—Dr. J. Franklin Troupe has restored the Old Valley Colonial Mill, located west of Telford, and it is making flour once more. The mill is said to date back to 1737.

SOUTH DAKOTA

Sioux Falls, S. D.—The South Dakota Farmers Elvtr. Ass'n will hold its 30th annual convention in this city on Dec. 8, 9 and 10.

Tripp, S. D.—The Farmers Elvtr. Co. has let contract to R. W. Oglesby for razing its west elevator. The material is being used in other buildings.

Garretson, S. D.—The Baker Grain Co. is making preparations to handle feed and coal and is erecting a warehouse and coal shed near the elevator for that purpose.

Bonesteel, S. D.—The Farmers Grain Co. is building a new 20x48x8-foot galvanized iron feed and flour bin between its two elevators. The building is set up on 30-inch concrete foundations and is as near vermin-proof as it is possible to make it.

SOUTHEAST

Hattiesburg, Miss.—E. E. Deen purchased a Standard Seed Cleaner from the Sidney Grain Mch. Co.

Wilmington, Del.—Phillips-Thompson Co. has installed a fan sheller which was furnished by the Sidney Grain Mch. Co.

TENNESSEE

Memphis, Tenn.—The Farmers National Grain Corp. has closed its Memphis office, operated for the past three years.

TEXAS

Brady, Tex.—Rodie & Co. have installed a cleaner which they purchased from the Sidney Grain Mch. Co.

UTAH

Roosevelt, Utah—A two-story feed mill and mixing plant, 24x34 feet is under construction at the Roosevelt Flour Mill, E. H. Peterson, owner.

WISCONSIN

Gallaway, Wis.—Erling Torgerson, of Rosholt, has bot the Kluck Feed Mill here.

Glenhaven, Wis.—Richard Metcalf and Leonard C. Kalt both recently purchased a cleaner from the Sidney Grain Mch. Co.

Milwaukee, Wis.—The rate of interest for November has been determined by the finance com'te of the Grain & Stock Exchange at 5%.

Melrose, Wis.—James Thomas, of West Salem, former proprietor of the North Bend Mill, has leased the Melrose Mill, which was closed for two weeks for repairs.

Lake Geneva, Wis.—Lake Geneva Feed & Supply Co., incorporated; capital stock, 10 shares, par \$100 each; incorporators: T. Kiefer, R. Knell, J. Bullenthin and J. Morissy.

LaValle, Wis.—A lightning surge came in over the power wires and burned out a potential transformer on the switchboard and damaged the voltmeter in the plant of V. A. Duddleston and L. J. Duddleston on Oct. 3.

New Holstein, Wis.—Fred Schildhauer, proprietor of the former Iverson elevator, has opened a feed store in the old Iverson building south of the elevator and has constructed an addition to the rear of the building, 14x20 feet, with full concrete basement, to house his new feed grinding and mixing equipment. The addition has dump platforms on one side and loading platforms on the other. A 30-h.p. hammer mill, equipped with a magnetic separator, has been installed.

Stockmen who practice certain approved range building methods will be paid benefits of \$2 per head of cattle carrying capacity. The government will make a gift to the farmer of \$1 for each linear foot of well dug or drilled; for reseeding depleted range land, \$2.50 an acre for reseeding with crested wheat grass; \$1.25 an acre for reseeding with slender wheat grass, western wheat grass, or brome grass (*bromus inermis*).

Supply Trade

Boston, Mass.—An office, staffed for consulting and sales engineering service was recently opened here by Leeds & Northrup Co.

Chicago, Ill.—Recently off the press is a new 28-page Book No. 1619 on Link-Belt automatic coal stokers for industrial and commercial use in capacities up to 300 H.P. The book is copiously illustrated, reproduces numerous letters from users, and gives much pertinent data. A copy of the new book will be sent to any interested reader upon request addressed to Link-Belt Co.

Milwaukee, Wis.—H. W. Harman, for many years head of the engineering and research departments of the Stearns Magnetic Mfg. Co., has been transferred to the sales department in the capacity of sales engineer with supervision of the purchasing department. The Stearns plant has been enlarged to provide increased production facilities in the main fabricating and erecting departments.

Bloomington, Ill.—Frank J. Temple, 61, a designing engineer, died Saturday, Oct. 10, while at work at the Eugene Funk farm. Burial was in a Decatur cemetery on the following Tuesday. Mr. Temple was born Jan. 1, 1875, in Carroll county, Ind., and had lived in Bloomington for the last 10 years. For 19 years he was employed by the Union Iron Works. Surviving are his widow, Mrs. Jean T. Temple, and two sons.

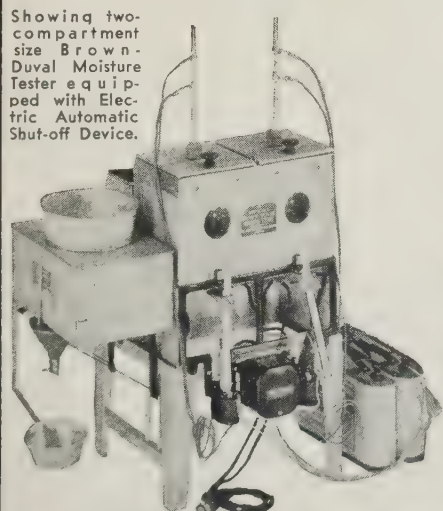
New York, N. Y.—The "U. S. Bucket Belt," a new addition to its line of elevator belts, has been announced by United States Rubber, New York. The new belt was designed to care for handling lighter stone, coal and similar services. It is claimed the U. S. Bucket with its specially designed 32 oz. duck body and high grade cover will help to better meet the range of field requirements and should prove particularly valuable as an intermediary belt between the heavier duty and lighter weight elevator belts.

Chicago, Ill.—Fairbanks, Morse & Co. recently signed a 20 year lease for 52,000 square feet of space, occupying the five lower floors of the fifteen story Harvester building at 600 S. Michigan ave. The structure will be renamed the Fairbanks-Morse building. The company has occupied its present building at 900 S. Wabash ave. for three decades. Leasing of enlarged quarters is in line with the substantial development and growth of the company, which was established in 1830 when the firm of E. & T. Fairbanks & Co. began the manufacture of scales at St. Johnsbury, Vt. The manufacturing activities were greatly enlarged when C. H. Morse, father of Robert H. Morse, present president, founded Fairbanks, Morse & Co. It has factories in Beloit, Wis., St. Johnsbury, Vt., Moline, Ill., Indianapolis, Ind., Three Rivers, Mich., Stuttgart, Ark., and San Francisco, Cal. On its payrolls are close to five thousand persons.

Commission merchants may mingle their own with customers' funds that are segregated, without violating the Commodity Exchange Act, according to an opinion by the solicitor of the U. S. Dept. of Agriculture given Oct. 21.

A Patman Act complaint has been lodged by the Federal Trade Commission against the U. S. Quarry Tile Co., Canton, O., charged with granting a 15 per cent discount to wholesalers regardless of quantity sold, which discount was not made available to tile contractors, some of the alleged wholesalers selling to consumers.

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Patents Granted

2,035,893. Treating Grain or Vegetables. Augustinus Edvard Jonsson, Stockholm, Sweden. The receptable for the grain is subjected to heat radiation and to pressure as well as suction from a condenser.

2,054,250. Automatic Weighing Machine. Warren D. Jordan, Joliet, Ill. An electric motor drives the feeder from the hopper into spout to container that drops as container fills. The downward movement of the container platform opens the circuit of the electro-magnet holding a clutch resiliently.

2,042,296. Insecticide. Hyman E. Buc, Roselle, N. J., assignor to Standard Oil Development Co., of Delaware. An insecticidal preparation, comprising a relatively non-volatile petroleum oil, insecticidal material selected from the group consisting of rotenone and rotenoids, and an aryl alkyl ether, the amount of aryl alkyl ether being sufficient to keep the insecticidal material dissolved in the petroleum oil.

2,054,279. Bag Filling Machine. Howland F. Briggs, Buffalo, N. Y., assignor to Bagpak, Inc., New York, N. Y. In a rotary bag filling machine, a bag pushing device comprising an arm pivoted to the machine and rotating therewith with a cam follower mounted upon the arm, and a fixed cam with which the follower engages adapted to advance and retract pushing device accurately with respect to the axis of rotation of filling machine.

2,054,507. Hammer Mill Screen. Henry John Mankoff, Wichita, Kan. A hammer mill grinder screen, comprising a support, a curved plate mounted within the support, said plate having a central cut away portion, spaced rods rigidly secured to the outer surface of the curved plate, sleeves rotatably mounted on the rods, the ends of the sleeves engaging the edges of the cut away portion, portions of the sleeves extending only slightly above the inner surface of the plate.

2,052,311. Hammer Mill Feeder. Alexus C. Lindgren, Chicago, and Clemma R. Raney, Riverside, Ill., assignors to International Harvester Co. A hammer mill comprising an upright drum providing a reducing chamber having a peripheral reducing screen, a rotor operable in the chamber having peripheral hammers cooperable with the screen in reducing material, one side of the drum having a feed opening, a hopper carried by the drum and having a throat portion terminating substantially at the edge of the feed opening and slightly inwardly spaced therefrom, whereby

the throat portion serves to feed material from the hopper to the adjacent face of the rotor.

2,052,996. Bag Filling Machine. Gustav A. Witte, Catskill, N. Y. A pivoted frame is engageable with the bottom and sides of the bag and movable downwardly in response to a predetermined weight thereon. Means are provided for delivering fluent material to the bag, and means operable in response to the downward movement of frame for positively tilting the same about its pivot and thereby causing the bag to fall laterally away from the machine.

2,042,946. Roughage Mill. John Holland-Letz, Crown Point, Ind., assignor to Letz Mfg. Co. The mill comprises a frame, a cutter head, a grinding mechanism located directly below cutter head, a separating chamber located between cutter head and grinding mechanism, and a mixing fan mechanism communicating with separating chamber and with grinding mechanism for elevating and mixing the material with the lighter material separated from the heavier material in separating chamber.

2,052,900. Conveyor. Amos Searles, Moscow, Pa., and Chas. A. Swartz, Bronxville, N. Y. Narrow rollers are spaced apart lengthwise of the belt between which series the belt is otherwise unsupported, the rollers of each series being spaced apart from each other laterally of the belt and each roller being individually so narrow that the support of the belt is effected by narrowly localized contacts with rolls, permitting flexure of belt transversely and lengthwise between said regions of contacts.

2,050,586. Automatic Weighing Machine. Frank A. Randall and John D. Cantoni, Napa, Cal. The scale has a main feed, a trickle feed, a weighing receiver, means for establishing an electrical circuit when a certain amount of material is discharged into the receiver, means controlled by said circuit for closing the main feed and breaking of said circuit, means for re-establishing circuit when the weight of material reaches the exact amount desired, and means controlled by circuit for closing the trickle feed.

2,050,231. Dust Separator. Augustus J. Sackett, Anne Arundel County, assignor to the A. J. Sackett & Sons Co., Baltimore, Md. Several cones are combined with a fan providing a downward current of air, the apparatus having a closed casing to provide for continuous circulation of the air, and being provided with a downwardly inclined portion beneath the settling space with an opening to discharge the dust, the air deflector having a discharge for the solid material of relatively small cross section compared to the free cross section of said member around the spreader, the cleaned material serving to retard the passage of air thru the discharge opening of the deflector causing the main portion of the air to be retained and deflected upwardly into the settling space.

2,052,876. Magnetic Separator. Ernest Grosenbacher, Fajardo, Puerto Rico. The separator comprises a recessed non-magnetic supporting bar, an inclined non-magnetic guide member for a traveling body of material carried by supporting bar, a magnetic base-plate secured to bar, a non-magnetic cover-plate located in the surface engagement with guide-member and provided at intervals along its lower edge with recesses, magnetic angle pieces fitted over the lower edge of guide-member and into the recess of cover-plate, pole shoes on base-plate at intervals in spaced vertical registry with said angle pieces.

2,045,082. Corn Crib and Granary. Peter J. Hegnes, Canton, S. D. The webs of T-shaped uprights converge inwardly, cross-strips in the spaces between the uprights engaging in the corners between the heads and webs thereof, spacing blocks between the strips also engaged in said corners to hold the strips vertically spaced from each other, shutters, means to connect the shutters for vertical adjustment to the strips, thereby to vary or completely close the space between adjacent strips, a roof connected to the uprights and tie wires having turn-buckles encircling the uprights to frictionally hold the uprights, strips and spacing blocks in assembled relation.

2,055,131. Automatic Weighing Machine. Mikael Vogel-Jorgensen, Copenhagen, Denmark, assignor to F. L. Smith & Co., New York, N. Y. The combination of a weighing mechanism, a receptacle supported by the weighing mechanism, a motor operatively connected with the receptacle to effect movement thereof to discharge the material therefrom, a switch operatively connected with the motor, a weighted lever carried with the switch and acting when released to shift the switch and close the connections to the motor, and means normally engaging the lever to prevent movement thereof and moving downward with the receptacle to disengage the lever.

2,040,660. Batch Apparatus. Herbert S. Lenhart, Allentown, Pa., assignor to Fuller Co., Catasauqua, Pa. Batches of predetermined weight of bulk material are drawn from a storage bin comprising the combination of a scale, a batch hopper, a casing having inlet and discharge ports, a mechanical feeder within the casing, a motor for driving the feeder, electrically actuated gate members closing the inlet and discharge ports of the casing, electrically actuated means for driving said members, control circuits for the motor and said electrically actuated means including switch means movable to closed position by an element of the hopper discharge gate when the latter closes to energize the motor and gate actuating means to drive the feeder and open the gate members.

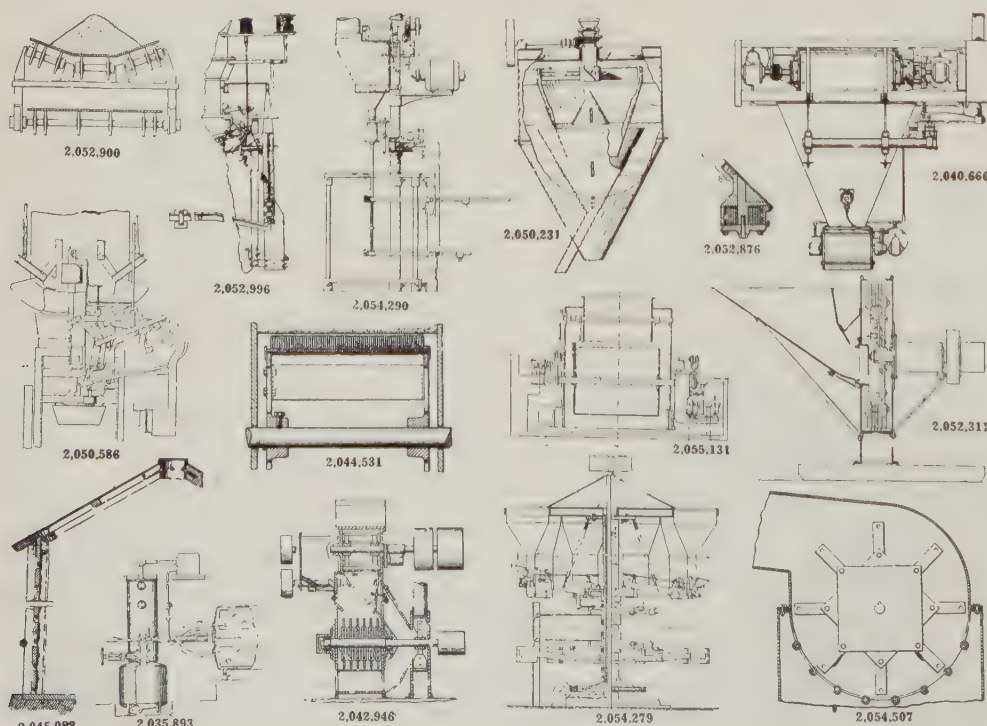
2,044,531. Huller. Leopold Kaspar, Sr., Olmutz, Czechoslovakia, and Nikolaus Kistner, Offenbach, Germany, assignors to Kaspar Getreideschalmaschine G. m. b. H., Offenbach. A horizontal cylinder has an interior treatment surface for grains and a rotating drum within. Shanks of different lengths are provided for alternate beater elements at any desired point of the length of traverses, the shorter shanks forming interruption between the longer shanks for the reduction of lumps of grain, some of said flattened beater elements having their planes extending substantially parallel to the traverses, the working portions of the beater elements arranged on one side and the same traverse forming collectively a yieldable row in which each element serves to work independent grains and some of said elements having their flattened faces disposed so as to impart to said grains a feed impulse axially of said cylinder independently of the other elements.

I. C. C. Decisions

In No. 20251, J. Allen Smith & Co. v. Southern the Interstate Commerce Commission restricted its former finding to rates thru Louisville and Cincinnati on grain from and beyond Ohio and Mississippi River crossings.

In 27306, Union Starch & Refining Co. v. Wabash the Interstate Commerce Commission has awarded \$208.67 reparation for inadvertent cancellation of the transit privilege at Granite City, Ill., on corn from points in Illinois. The product was forwarded to St. Louis, Mo.

In I. & S. No. 4187 the Interstate Commerce Commission has vacated the order suspending cancellation of transit on grain at Nashville, Chattanooga, Atlanta, Rome and Dalton, Ga., from Mobile and New Orleans, to points in Georgia and Florida. Transit had been granted in 1934 on account of drouth, the carriers now holding the routes being too circuitous.



Grain Carriers

Reduced drouth rates to the Dakotas were authorized by the I. C. C., Oct. 24 over the Northwestern, M. & St. L., Milwaukee and Omaha roads.

The biggest cargo of wheat from an ocean port will soon leave Vancouver in the new steamship Leif Ericsson, chartered to load over 14,000 tons, or 600,000 bus.

Cars loaded with grain and grain products during the week ended Oct. 10, totaled 30,058, against 37,015 during the like week of 1935 as reported by the Ass'n of American Railroads.

The Birmingham Grain Dealers Ass'n has asked the Interstate Commerce Commission to withhold the assignment of dates for the hearing on No. 17000, part 7-A, grain rates in southern territory, to give the dates effective July 13 a trial.

The Erie Canal will be closed for wooden boats Nov. 25 and for metal boats and self-propelled units Nov. 30, unless sooner closed by ice. Clearance will be issued on the Champlain Canal up to Nov. 30 and on the Oswego Canal up to midnight Dec. 3.

The Great Northern and the Soo have been authorized by the Interstate Commerce Commission to continue the existing adjustment of lower rates on coarse grains than on wheat between the Head of the Lakes and points on their lines in Minnesota until intrastate rates of the Northern Pacific are increased between the same points.

Chicago, Ill.—The federal court on Oct. 16 dismissed the suit of the B. & O. and three other roads for an injunction to restrain the Interstate Commerce Commission from enforcing the reduced grain rates from points in Illinois to Chicago prescribed in its order of May 28. The carriers contended the Interstate Commission had no power to prescribe rates entirely within Illinois.

Kansas City, Mo.—The Missouri Public Service Commission has rescinded its order rejecting the tariffs of the western trunk lines providing for cross-town switching rate at Kansas City of 1 cent per cwt. and the lowered rate will become effective on Missouri state traffic Oct. 17 and will expire June 30, 1937, unless the expiration date is changed. The reduced rate has been in effect on interstate movement of grain within the Greater Kansas City switching limits since Oct. 7.

Drouth emergency reduced freight rates have been extended by the Great Northern to Nov. 21. Effective Oct. 12 reduced freight rates on soybean, linseed and cottonseed cake or meals were authorized from Louisiana, Mississippi, Tennessee and western Kentucky points to counties in the drouth area entitled to reduced rates. Previously the reduced rates on these commodities had applied to points of origin west of the Mississippi river and only Memphis and Cairo in the Mississippi valley.

The Shippers Conference of Greater New York is opposed to the regulation by the Interstate Commerce Commission requiring highway carriers to file their contracts. Wm. H. Chandler, traffic manager of the Merchants Ass'n says: "If the details of these contracts are made public, some shippers are going to demand all kinds of unfair concessions from their truckmen, basing their demands on contracts made with rivals whose traffic may be handled under entirely different conditions. Publicity of these contracts would open the way for litigation and bickering with a great deal of expense to shippers."

Increased minimum grain rates from North Atlantic ports have been announced by the North Atlantic-Continent Conference. October rates from U. S. ports have been 10c to Antwerp, 10 $\frac{1}{4}$ c to Rotterdam, 12c to Hamburg and 12 $\frac{1}{2}$ c to Bremen. The November rates will be, respectively, 11 $\frac{3}{4}$, 11 $\frac{3}{4}$, 13, and 13 $\frac{1}{2}$; and the December rates will be 1c per ton still higher. The rate on barley will be one cent over the wheat basis and on oats two cents. Soybeans and feed wheat in bulk will take the barley basis.

Chicago, Ill.—The Interstate Commerce Commission will hold a conference at the Sherman Hotel, Nov. 10, of parties interested in proceedings in I. and S. 4208, grain, to, from and between southern territory, and I. and S. 4229, grain, Texas to Mississippi river for beyond. These proceedings are a part of docket 17,000, part 7-A, the I.C.C.'s grain rate structure investigation. The purpose of the proposed conference is a general discussion of the issues, procedure and assignments for hearing. The commission has set December 2 as the date for the initial hearing, subject to approval of the conference which will also determine the place for the initial hearing.

The Elkins Act makes illegal the extension of credit to a shipper beyond the 96 hours after presentation of a freight bill, exclusive of Sundays, legal holidays and Saturday half-holidays. The N. C. & St. L. Railroad continued to extend credit to the Stivers Milling Co., Rome, Ga., after the mill had failed to pay for freight shipments as required by the law. The railroad company Oct. 12 paid a fine of \$2,000 on two of the 10 violations after hearing before Judge Underwood in the federal court at Atlanta. The Stivers Milling Co., itself, paid a fine of \$1,000 in federal court at Rome, Ga., last spring. The law holds the shipper and the railroad equally guilty. This is believed to be one of the first prosecutions under this section of the Act.

Rockford, Ill.—Lawrence Farlow, chairman of the grain and hay com'ltee of the Mid-West Shippers Advisory Board, at its recent meeting reported that "the grain industry had a sort of healthy little car shortage during this past quarter—along in July and August. The roads in Illinois were then taxed to their capacity to supply grain cars. There were a few slight delays, but nothing serious. However we found it necessary to call upon the Car Service Division for relief in a few instances, and thru their good efforts some special trains were put on some of the railroads to move the traffic and relieve the congestion. I wish to express my appreciation of the efforts on the part of the railroads who participated in furnishing those cars and to the Car Service Division for the assistance they gave."

The traffic bureau of the Tacoma Chamber of Commerce has prepared a formal complaint to the Washington State Department of Public Service against the transit tariff of the railroad companies which prohibits grain moving from elevators to flour mills or the products of the flour mills from being sent to industries within the switching limits of Tacoma or Seattle. The complaint will be made on behalf of the Tacoma Chamber, Port of Tacoma, Seattle Chamber of Commerce, Port of Seattle, and North Pacific Millers Ass'n. Under provisions of the tariff as now endorsed, grain can be stored in transit at Tacoma and shipped free to Seattle mills or stored in Seattle elevators and shipped to Tacoma, and the same applies with Portland. It cannot be stored in the Port of Tacoma elevator and switched to Tacoma mills and the same situation exists in Seattle. In Portland, however, the Public Service Commission has eliminated the objectionable provision and formal complaint must be filed to accomplish the same result in Tacoma and Seattle.

Carriers Propose Rate Revision

A 78-page brief has been filed by 126 railroads with the Interstate Commerce Commission asking that outstanding orders of the Commission be modified to give the railroads opportunity to bring a rate revision before the Commission.

The carriers say: For the first eight months of 1936, the net income of class I railroads was approximately \$16,400,000. During the same period the emergency charges authorized by the commission in emergency freight charges, 1935, produced revenue to the class I railroads of \$77,000,000. Without the emergency charges, which will expire December 31, 1936, in the absence of further order by this commission, class I railroads would have failed to earn by approximately \$60,600,000 their fixed charges for the first eight months of 1936.

Over sixty pages of the brief were devoted to detailing proposed rate changes. The carriers said that "the proposed changes, in the aggregate, will result in a lower level of rates than the level of existing rates, including emergency charges."

One change alone, it was said, would result in 1,800 reductions in rates and less than forty increases. However, the net result of all changes would be to retain for the roads a portion of the revenue which they are at present scheduled to lose.

The I. C. Commission has given shippers until Nov. 7 to reply to carriers' petition.

Robert H. Adams, at one time pres. of the American Linseed Co., died Oct. 16 at Greenwich, Conn., aged 68 years.

Highway Carriers Meet

The big ass'n known as the American Trucking Ass'ns, Inc., held its annual meeting Oct. 19 at the Stevens Hotel, Chicago.

WM. E. LEE of the Interstate Commerce Commission told them "there is room in this country, in the public interest, for each and all our systems of transportation. There is a field for the railroads and a field for the motor carriers. Under fair regulation, each will be expected to render to the people of the country the kind of service for which it is best adapted."

WM. H. DAY, pres. of the National Industrial Traffic League, said a bank official phoned him as to going truck rates between New York and Boston. He replied that they ranged from 20 to 75 cents per 100 pounds. Investigating further he found four Boston manufacturers, all producing the same commodity, all catering to the same New York trade and patronizing the same truckmen. The replies disclosed that the rates ranged from 25 to 50 cents per 100 pounds. No two were paying the same rate. The manufacturer having the heaviest tonnage was paying the highest rate, while the one with the lowest was paying the lowest rate.

JOHN R. TURNEY, former chief of traffic section for the federal co-ordinator of transportation, said the real competitor of the motor carrier is the motor truck.

"However desirable uniformity and identity in the charges of motor and rail rates may be, the motor carrier industry will sign its own death warrant if it attempts permanently to incorporate its charges as a part of an elaborate, complicated and largely obsolete rail-rate system.

"Shippers now have available facilities which enable them to transport their goods practically to any part of the United States by motor truck at a price which depends entirely on the cost to the shippers of operating their own trucks. This cost is the absolute ceiling for carrier rates—rail or highway. No shipper who is sane and free will continue long to pay more for the service."

Field Seeds

Jacksonville, Fla.—Frank S. Love has taken an office in the Burgiss Building.

Shelbyville, Ky.—The Shelby Feed & Seed Co. held a grand opening of its new establishment recently.

Mt. Jackson, Va.—Triplett & Vehrencamp have installed a seed cleaner purchased of the Sidney Grain Machinery Co.

Springfield, Ill.—Seedsmen of Central Illinois met at the Leland Hotel, Oct. 12, to discuss new seed regulations.

Baltimore, Md.—Benjamin F. Wesley is back with Blamberg Bros. as vice pres. and manager of sales and purchases.

Wellston, O.—Seed will be handled in a branch of Gillis Produce, established in South Wellston with F. J. Shelton as local manager.

Council Bluffs, Ia.—The Ouren Seed Co. is having the Van Ness Construction Co. build new driveway approaches and install a new shaker feeder.

Louisville, Ky.—Carlyle Jefferson has been made sec'y-treas. of the National Seed Co. Pres. J. William Jefferson, his father, will spend the winter in Florida.

Milwaukee, Wis.—The Kellogg Seed Co. has changed its stock from \$250,000 preferred par value to 2,700 shares common no par value and 5,000 shares preferred no par value.

Kansas City, Mo.—The Bagnall Seed Co. has leased a building less than a block from its present location for office and warehouse space. The five stories contain 31,000 square feet of space.

Humboldt, Ia.—In night and day shifts 65 men are now employed drying and sorting hybrid seed corn in the new \$25,000 building here of the DeKalb Quality Hybrid Corn Co., of DeKalb, Ill.

Lebanon, Ind.—The Davis Seed Co. is erecting a frame building, 80x60 ft., near its present location, to be used for drying hybrid seed corn in the Wisconsin type of bin driers, with a capacity of 10,000 bus. per season.

Springfield, Ill.—A state seed council was formed at a meeting here Oct. 12 with the following officers: Pres., Earl Sieveking, Bloomington, Ill.; vice pres., C. L. Thrift, Decatur, Ill.; sec'y, I. C. Pratt, Roseville, Ill.; and treas., W. G. Kelly, Peoria, Ill.

New York, N. Y.—September receipts of flaxseed were 333,680 bus., compared with 260,000 bus. in September, 1935. September shipments of clover seed were 892 bus., compared with 2,590 bus. in September, 1935. September, 1936, shipments of timothy seed were 14,288 bus.

Directory

Grass and Field Seed Dealers

CRAWFORDSVILLE, IND.
Crabbs, Reynolds, Taylor Co., clover, timothy.

GREEN SPRINGS, OHIO
The O & M Seed Co., seed merchants.

PAULDING, O.
Stoller's Seed House, wholesale field seeds.

ST. LOUIS, MO.
Mangelsdorf & Bro., Ed. F., wholesale field seeds.
Scott, T. Maurice, field seeds, carlot originator.

SAULT STE. MARIE, MICH.
Soo Terminal Co., grass, flax, peas.

SIOUX CITY, IOWA
Sioux City Seed Co., seed merchants.

Olympia, Wash.—Washington's pea crop this year will be 2,400 tons greater than for 1935, while the United States average is a third less than last year, according to Walter J. Robinson, director of agriculture. The state crop is 17,430 tons, compared with 15,000 tons in 1935.—F.K.H.

The rate of duty applicable to white clover seed is being considered by the Court of Customs, the Doughten Seed Co. claiming it to be dutiable at 3 cents per pound as clover not specially provided for or at 2 cents per pound as grass seed not specially provided for. The customs claims the duty is 6 cents per pound under paragraph 763 of the tariff act of 1930, naming "white and ladino clover."

Crawfordsville, Ind.—Shirl Herr, 61 years old, vice-pres. of the Crawfordsville Seed Co., who, as an inventor, aided the second Antarctic expedition of Admiral Byrd, died Oct. 1 at his home here, death being due to a heart attack. Herr was born in Boone County, Ind., coming to Crawfordsville as a young man to enter the employ of the Crabb-Reynolds-Taylor Co. A few years later he and Homer Flanigan formed the Crawfordsville Seed Co. Mr. Herr also invented a cloverseed cleaning machine. Several years ago he received the Kiwanis Club award as the city's outstanding citizen in civic work.—W. B. C.

LaGrande, Ore.—A first important shipment of Grande Ronde Valley small seed this fall went to Malad City, Idaho, where it will be taken by the U. S. Government. It consisted of 3,440 pounds of crested wheat grass, sold thru the Blue Mountain Seed Growers' Ass'n, at 50 cents a pound, 10c more than the prevailing price in 1935. Severe drouth conditions in other parts of the nation causing practically a total failure of seed crops improved the market greatly for Washington, Idaho and Oregon, causing growers to believe that the price will be as high as 55c a pound before the year closes. Estimate is that crop will run as high as 96,800 pounds.—F.K.H.

Minneapolis, Minn.—Seed grain amounting to 1,750,000 bus. has been purchased for the account of the government, reports Francis J. FitzPatrick, economist of the Federal Surplus Commodities Corp. Most of the wheat is from the Red river valley of Minnesota and the oats from terminal elevator dealers. Objective of the seed program is total purchases of 3 million bus. hard red spring wheat, ½ million durum, 1 million oats, ½ million barley and ¼ million flax, or a total of 5¼ million bus. of all grains to be distributed to farmers for planting next year in areas where crops failed this summer as a result of drouth. Plans do not contemplate any purchase or distribution of seed grain in the Southwest or other areas outside the four northwestern states, according to Mr. FitzPatrick.

Dayton, O.—The Roselawn Poultry Farm operated by W. J. and Rose Tibbals has promised the Federal Trade Commission to discontinue representations to the effect that competitive hatcheries engaged in the sale of sexed chicks are "unscrupulous racketeers," or that the sale of such chicks is a "racket." They also will stop representing that the mortality rate among sexed chicks has been found to be higher or different from the mortality rate of unsexed chicks; that the average accuracy of persons engaged in segregating chicks according to sex is only 71 per cent and not 90 per cent as claimed by experts; that sexed pullets cost at least 10

per cent more than unsexed chicks, and that such increased costs may run as high as 50 per cent more, when such are not the facts.

Tests of Smut Treatments

W. F. Hanna and W. Popp tested 37 preparations for the control of cereal smut, in field experiments, and reported on 16 of them in Scientific Agriculture, finding as follows:

Formalin gave satisfactory control of wheat bunt, barley covered smut, and oat smuts, but, though relatively cheap, it is more difficult to apply than the dusts and may cause seed injury. The copper dusts are recommended only for treatment of wheat and hull-less oats. In general giving good control of bunt when the seed is not too heavily contaminated. New Improved Ceresan was effective against wheat bunt, barley covered smut, and oat smuts, and because of the light rate of application it should not clog the drills. In certain tests, the results of which are not detailed here, seed treated with copper and mercury dusts gave a higher percentage of seedling emergence than the untreated seed.

Organic mercury dusts, because of their effectiveness and ease of application appear to be replacing liquid treatments and copper dusts in the control of the cereal smuts.

Misbranding of Seeds

The Rowland Co., Athens, Ga., had rye seized as germinating only 49 per cent, tho labeled 85 per cent.

The Largen Lespedeza Co., Fayetteville, Tenn., shipped forty bags of lespedeza into Alabama, 25 bags of which were seized and later released to the shipper under bond for proper relabeling.

The Famo Feed Milling Co.'s shipment from St. Joseph, Mo., of five bags of sorghum seed into Kansas was seized by the government because it was not Atlas as labeled.

The Leonard Seed Co.'s shipment of ten bags of lima beans from Chicago into Alabama, was misbranded as to germination. Four remaining bags were seized and ordered by the court to be destroyed.

The Sun-Field Seed Service, Chicago, has been found guilty, for the 9th time, of misbranding seed oats, in an order confiscating 20 bus. of oats shipped from Little Rock to New Orleans. The name is an alternate name used by the American Seed Co.

Illegal for Farmers to Sell Untested Seeds

By R. H. PORTER, head of Iowa State College Seed Laboratory.

The Iowa Agricultural Seed Law requires that any seed which is advertised, offered or exposed for sale must bear a label giving the germination percentage and the purity.

It is illegal for farmers to sell seed at farm sales without first having it tested. Seed companies are required to comply with the Iowa Seed Law and farmers should do likewise.

The Iowa State College Seed Laboratory is well equipped to make purity and germination tests for seed companies and farmers. For 25 cents a farmer may learn the quality of his seed. Considering that a given lot of seed may be used to cover many acres, this charge is small, actually being considerably less than the cost of making the tests. Farmers who are planning to sell or advertise seed for sale should send samples direct to the Iowa State College Seed Laboratory, Ames.

Seed may be exempted from the provisions of the seed law when it is: (1) "possessed, exposed or offered for sale, or sold for food purposes only;" (2) "sold or in store for the purpose of re-cleaning;" (3) "sold by one farmer to another and delivered upon the vendor's premises; but if such seed is adver-

tised for sale or is delivered through a common carrier, then the seed shall be subject to all the requirements" of the law.

Provisions of the seed law forbid the sale or distribution for seeding purposes of seed containing any of the primary noxious weeds such as quack grass, Canada thistle, perennial sow thistle and pepper grass, European morning glory, horse nettle, leafy spurge, Russian knapweed and buckhorn.

Waste in Government Seed Buying

Edwin E. Jones of Indianapolis, a government auditor for the Resettlement Administration in Missouri, reports that the drouth relief program lost approximately \$75,000 to \$85,000 on one series of seed corn transactions.

Corn amounting to 100,000 bus. was purchased at \$1.10 a bushel. Storage, insurance, handling charges, elevator, etc., brought the total cost to \$1.40 a bushel. The commission started selling this corn at \$2.10 a bu. But upon repeated complaints from farmers a germination test was run. This test proved the corn to be only an average grade of feeding corn, and most of the supply was disposed of at low market prices.

A letter written to Prof. C. A. Helm of the University of Missouri, by Arthur E. Gilman, who was in charge of the liquidation of these two programs, acknowledges serious blunders in the methods of handling. In the letter, Mr. Gilman admits that G. A. Kent, Missouri grain dealer from whom a supply of corn was purchased, made a profit of about \$25,000.

Chicago Plans Huge Grain and Live Stock Exhibit

America's annual continental congress of agriculture, the International Live Stock Exposition, will be held Nov. 23 to Dec. 5 in the new International Amphitheater at the Chicago Stock Yards.

It will be the 37th renewal of this largest annual exhibition of pure bred farm animals and crops in the country, and according to the management, one of the biggest shows in its history.

B. H. Heide, secretary-manager of the Exposition, states that plans are now under way to house over 13,000 animals at the 1936 show. Approximately \$100,000 will be paid in cash premiums to winning exhibitors in the various divisions of the Exhibition.

Growers from 30 states and five Canadian provinces exhibited last year in the International Grain and Hay Show, largest competitive farm crops show in the world. Entries will be accepted until Nov. 20 for this department in which over a thousand cash prizes will be offered in 95 different classes.

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St. Louis, Missouri

Wheat Control in France

Our ancient ally France is now well on the way to the regimentation of the agricultural, milling and baking industries. An Office du Ble, which, being translated freely, we may term a National Wheat Office, will maintain a stock of grain and flour necessary for the supply of the cities and armed forces. The Office will be an independent body, yet its finances will be controlled by the Treasury. The board of management will include members drawn from various official interests concerned, from the producers, chambers of agriculture, milling and baking industries. Its duties will comprise the estimation of the crops and the orderly marketing of the harvest.

A national selling price for each grade will be set up, and for each subsequent month a storage fee will be added. The Office will also fix the price of flour and bread, and will devote particular attention to the margin between wheat prices and bread prices.

There will be no free market in grain, only approved co-operative societies will be allowed to buy wheat from the producers, and, where none exist, these will be created. The cost of running the societies will be met by a tax on the farmers, who will be enabled to pay the tax from credits supplied by the societies, who, in turn, will be financed in respect of the farmers' credits by the Bank of France.

To render the system watertight the Office will enjoy a complete monopoly in the sale and purchase of no matter from what source. Undoubtedly the experiment will be fascinating, but how intensely dull life will become for the producer.—*British Baker.*

Imports of Forage Plant Seeds

Imports of forage plant seeds during the three months prior to Oct. 1, 1936, and 1935, as reported by the Bureau of Plant Industry, have been as follows, in pounds:

	September		July 1 to Oct. 1	
	1936	1935	1936	1935
Alfalfa	11,100	.....	11,100	.....
Bluegrass, Canada	17,500	11,700	17,500	22,900
Brome, smooth	61,600	9,500	93,600	9,500
Clover, alsike	267,400	.....	267,400	.....
Clover, crimson	1,808,000	344,100	4,577,700	1,736,900
Clover, red	216,300	.....	216,300	.....
Clover, white	126,300	76,600	265,600	230,000
Grass, orchard	287,500	.....	840,600	.....
Millet, foxtail .....	.....	.....	5,200	250,500
Rape, winter	852,400	33,000	6,208,800	185,800
Ryegrass, Ital.	8,800	4,400	13,300	5,600
Ryegrass, perennial	86,500	20,700	185,600	71,800
Vetch, hairy	784,800	459,400	784,800	509,000
Bentgrass .....	.....	1,300	1,200	13,500
Bluegrass, annual .....	.....	.....	1,500	.....
Bluegrass, rough	9,800	18,000	24,300	18,000
Clover, suckling	4,200	.....	11,000	2,000
Dogtail, crested	200	10,000	2,400	10,000
Fescue, Chewings	259,600	43,100	530,600	115,800
Fescue, other	40,500	1,300	47,300	2,600
Grass, Dallis	6,200	1,000	7,100	6,600
Grass, mixtures	1,500	.....	1,500	.....
Grass, rescue .....	.....	4,400	300	10,000
Grass, Rhodes .....	.....	1,000	1,900	1,000
Grass, Sudan .....	.....	.....	.....	296,100
Medick, black	4,400	2,200	6,400	5,200
Sweetclover, white	112,500	.....	274,700	.....
Sweetclover, yellow	17,700	.....	33,000	.....
Wheatgrass, crested	6,700	25,100	6,700	25,100
Wheatgrass, slender	25,500	.....	25,500	.....

Toledo Opens Grain Grading School

A grain grading school, under the supervision of H. F. Prue, federal supervisor, U. S. Dept. of Agriculture, was inaugurated at Toledo, Oct. 16th, with twenty students attending.

The first session reviewed the United States Grain Standards Act and the grain men were required to write in their answers to many pertinent questions. Later the correct answers were given with discussions.

The school's next weekly meeting will take up laboratory work, after which the students will be divided into groups depending upon the particular grain in which they are most interested. In this way, those more interested in corn, because it is the new crop, may specialize in that cereal, while others may choose oats or the other grains. Every attendant will eventually be permitted under this plan to study all of the grains in which he is concerned.

Members of the school are enthusiastic over the first session and with the opportunity to secure expert instructions in grain grading.

The Pacific Coast recently sold a full cargo of white wheat amounting to 185,000 bus. to Italy.

Italian Devaluation Disturbs Price Levels

Devaluation again of the French franc followed by the devaluation of the Italian lira reduces the purchasing power of those currencies in the world market, and has a bearish effect on prices of commodities in other lands exporting to those countries.

Realizing this, the governments follow with reductions in import duties to keep the cost of living from rising.

Pulling down the pound sterling from \$5.06 to \$4.89 is equivalent to a reduction in the price the British can afford to pay for North American wheat of about 5 cents per bushel.

The Italian reduction in the import duty on wheat lowers the rate to 67½¢ a bushel, as compared with \$1.60 duty before the lira was devalued.

The Italian cabinet has approved a plan to devalue the lira by about 40 per cent, the rate being 19 to the dollar. The lira had been ruling at a little over 13 to the dollar.

Before the League of Nations assembly at Geneva, W. S. Morrison, financial sec'y of the British treasury, in an address urged the abolition of import quotas and exchange controls, in the interest of world economic recovery.

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Feedstuffs

New York, N. Y.—September receipts of millfeeds were 65 tons and of hay 12 tons, compared with millfeeds 121 tons and hay 27 tons in September, 1935.

Seattle, Wash.—The feed control committee met here recently and completed a draft of the revised feed law to be considered at regional meetings of the Pacific Northwest Feed Ass'n.

Flaxseed crushed by 27 mills in the United States during the quarter prior to Oct. 1, amounted to 134,884 tons, against 167,952 tons during the like period of 1935 as reported by the Department of Commerce.

Portland, Ore.—Field service men of various manufacturers of feed to the number of 20 held their first meeting of the fall season recently at Thiele's. Meetings will be held the first Monday in every month.

Seattle, Wash.—New members of the Pacific Northwest Feed Ass'n are Lowen Feed Co., Ferndale; Mikkelson Brokerage Co., Seattle; Puget Sound Feed Co., Tacoma, and Washougal Cash Feed Store, Washougal, Wash.

Washington, D. C.—Senator Copeland of New York announced last week that he would present at the next session of Congress a new food and drug bill making drastic changes in federal health services. The bill would create an entirely new bureau.

The Federal Trade Commission has now issued an amended and supplemental complaint alleging that California Alfalfa Products Co., Pasadena, Cal., trading as Alvita Products Co., is practicing methods of competition substantially similar to those barred under the former order to cease and desist from advertising its food product has a therapeutic effect.

Yellow corn normally contains more carotene (vitamin A) than white corn. The New Jersey Station has found that the difference in color is not positively indicative of the usual differences in nutritive value. A yellow-corn ration excelled a white-corn ration in palatability and gain in body weight, but the white-corn ration excelled in digestibility of food energy. The same

station found that from the standpoint of vitamin A (carotene) content, yellow-corn silage could not be considered superior to that made from white corn.

Feed Control Officials Program

Among the speakers at the 28th annual convention of the Ass'n of American Feed Control officials at Washington, D. C., Dec. 3 and 4 will be H. L. McGeorge, pres. of the American Feed Manufacturers Ass'n, J. W. Kellogg, "The Role of Iodine in Animal Nutrition"; Harry D. Wilson, "Should Local Regulations Promulgated by Individual States Supersede the Regulations of the A. A. F. C. O.?" H. H. Hanson, "Uniform Regulations and the Uniform Feed Law"; G. H. Marsh, "Does Information Appearing on Tags Supersede Information Printed on the Bags?"; P. B. Curtis, "Yeast"; J. R. Manning, "Index of Decomposition in Fish Meal and Meat Scrap"; J. D. Turner, "New Distillery By-products"; V. L. Fuqua, "Designation of Ingredients as to Prominence," and G. H. Marsh and H. A. Halvorson, "Are the Present Fiber Standards of Wheat By-product Feeds Satisfactory?"

Southern Mixed Feed Mfrs. Meet

At its annual convention at Nashville, Tenn., Oct. 23, the Southern Mixed Feed Manufacturers Ass'n elected the following officers: Pres., Wayne Longmire, Knoxville; vice pres. J. F. Weinmann, Little Rock, Ark.; treas., John B. Edgar, Memphis; sec'y, E. P. MacNicol, Memphis. Directors: R. E. Barinowski, Augusta, Ga.; George Keith, Nashville; H. L. McGeorge, Memphis; John M. Wilson, Meridian, Miss.; E. Wilkinson, Birmingham; C. B. Fretwell, Spartanburg, S. C.; L. R. Hawley, Chicago.

V. L. FUQUA, of the Tennessee Department of Inspection, urged the appointment of inspectors under civil service rules. He said the tax of 20 cents per ton on feed in Tennessee was more than ample to pay the cost of inspection.

H. L. McGEORGE, pres. of the American Feed Manufacturers Ass'n, suggested that the surplus go to special departments of state universities to cover cost of studying how to lower live stock mortality on farms.

Thoro Mixes with Vertical Mixers

A problem to every user of a vertical feed mixer has been that part of the mix which remains in the feeding screw, due to necessary mechanical clearances, instead of following into the elevating screw and becoming a part of the mixture.

An elevator machinery builder is credited with the statement that drawing off one bag of the mixture and dumping it back into the feeding hopper of the mixer insures a thoro mix, with all of the ingredients in the proper proportion.

A better method is in use by A. J. Hosler, Mount Cory, Ohio, elevator operator. He explains:

"A part of practically all feed formulas that are given to us for mixing is ground corn.

"We practice putting the ground corn in

Feed Prices

The following table shows the closing bid price each week for January futures of standard bran and gray shorts, spot cottonseed meal, soybean oil meal and alfalfa meal, in dollars per ton, and No. 2 yellow corn and No. 2 yellow soybeans in cents per bushel:

	Minneapolis		Kansas City	
	Bran	Midds.	Bran	Shorts
Sept. 19.....	23.50	26.50	23.50	26.75
Sept. 26.....	23.50	26.00	23.75	27.25
Oct. 3.....	23.50	26.00	23.90	27.25
Oct. 10.....	25.00	28.00	25.00	28.40
Oct. 17.....	26.00	31.00	25.20	28.95
Oct. 24.....	26.00	31.00	25.55	28.65

	St. Louis		Chicago	
	Bran	Shorts	Beans	Soy-Meal
Sept. 19.....	25.00	27.50	1.19	40.50
Sept. 26.....	25.25	28.00	1.18½	36.40
Oct. 3.....	25.25	28.00	1.20	36.40
Oct. 10.....	26.75	29.25	1.26	35.50
Oct. 17.....	26.90	29.50	1.20½	36.40
Oct. 24.....	27.65	29.25	1.25½	35.90

	Cottonseed Meal		Denver	
	Ft. Worth	Memphis	Alfalfa	Chicago Corn
Sept. 19.....	36.00	32.50	28.00	1.17
Sept. 26.....	35.00	29.50	27.00	1.18
Oct. 3.....	35.00	29.50	28.00	1.08
Oct. 10.....	35.00	29.50	28.00	1.10
Oct. 17.....	35.00	29.50	28.00	1.07
Oct. 24.....	34.00	29.50	28.00	1.10

the feeding hopper of the mixer as the last ingredient.

"By this means nothing but ground corn remains as the lag in the feeder of the mixer. This lag is carried into the mixer with the next batch. Thus the proportioning of the ingredients in each formula is correct, and the mixing is complete."

North Dakota Standards for Dog Food

Standards for canned dog food effective Dec. 1 were adopted Oct. 15, as announced by C. S. Ladd, state food commissioner, of North Dakota. The guaranteed analysis must be: Crude protein, a minimum 10%; crude fat, a minimum 2%; crude fiber, a maximum 1%.

The label must likewise have imprinted thereon a statement of the ingredients used in the manufacture in order of their preponderance as to weight. This shall appear in a clear and conspicuous place on the label in legible type.

All ingredients used and all labels must comply with the provisions of the North Dakota Food and Drugs Act.

The fresh and/or frozen or cured meat and/or meat by-products and/or fish content of the finished product shall in all cases be not less than an amount equal in weight to all cereal and/or cereal by-products or filler contained therein.

Protein supplements such as cracklings, meat meal, meat scraps, soybean oil meal, sesame meal, coconut meal, peanut meal, fish meal, or other recognized protein supplements may be used only in their true supplemental relation. A total of 15% by weight of protein supplement can be used in proportion to the total weight of fresh and/or meat by-products and/or fish content in the finished product as defined above.

Canned dog food shall be sold only in cans holding one pound net weight or whole multiple of one pound and not any fractions thereof.

Predigesting Feeds

Extravagant claims have been made by commercial concerns and others on the value of processing feeds, the claim being made that the fiber is broken down and that starch is changed to sugar. Hayden and his associates at the Ohio Station found that processing roughage resulted in practically no change. The processing of feed containing grain resulted in some change of starch to sugars. However, cattle are equipped to break down starches without help.

Investigations with processed feeds thus far at the Wisconsin and Ohio Stations seem to give similar results, whether fed to horses, beef cattle, or dairy cattle. There appears from these experiments to be no practical advantage in processing feed. At the Ohio Station the steers fed processed feed were not as well finished as steers fed silage and a common corn belt ration. In fact, these steers sold for less on the market.

The Central Experimental Farm of Canada studied the processing of feeds for dairy cattle. The following is a quotation from Bulletin No. 96 of the Dominion of Canada Department of Agriculture:

1. In neither trial did the "processing" of the material add to or improve the nutritive value of the original roughage as judged by the results of the practical feeding tests, and by the chemical and bacteriological analyses.

2. In the preliminary feeding trial, the silage ration produced 8.9 per cent more milk and 6.2 per cent more fat than the sugar jack ration. In addition the sugar jack ration was found to be more expensive than the silage ration. In the second feeding trial, the silage ration produced 1.8 per cent more milk and 11.7 per cent more fat than the ration containing sugar jack. The production of milk and fat from the consump-

tion of the unprocessed feed, dry roughage, was equal to that from the roughage of the same character processed by the sugar jack system.—Bull. 72, Ohio Extension Service.

Artificial Vitamin A

Drs. Reynold C. Fuson and Robert F. Christ, working under a du Pont research fellowship in the organic chemical department of the University of Illinois, report officially in the current issue of Science that they have manufactured a compound artificially which answers the standard chemical tests for vitamin A.

Heretofore this vitamin was procurable principally from cod, halibut, and herring liver oils. Biological tests on vitamin A as found in nature have shown it is the vitamin that promotes growth, guards against infection and lengthens life in humans.

The report announces simply that the "synthetic material" responds chemically to "the standard test for vitamin A."

Proper Feeding Prevents "Big-Head" of Sheep

"Big Head," as the disease which has been killing sheep in south-central Iowa this summer is called by sheepmen, can be controlled, and in most cases prevented, by providing sufficient succulent forage and shade for the sheep.

Altho the definite cause of the disease has not been determined, Dr. K. W. Stouder, Iowa State College extension veterinarian, explains that it occurs only under conditions of intense heat, bright sun, lack of good feed and dusty pastures and yards. No traces of any bacterial infection have been found in any of the diseased sheep examined, and no particular weeds or plants have been isolated as being responsible, altho the poor nutritive value in these plants is probably a contributing factor.

Big head occurs only occasionally in Iowa, but it is found quite frequently on the western ranges, especially where the sheep are unprotected from the sun and lack good feed.

Grinding Grain and Roughage

It is necessary to grind grains for dairy cows to prevent the grain from passing thru whole and undigested. There is no need of extra fine grinding; in fact, this may be positively harmful, as finely ground feeds are more likely to be "doughy" and less bulky.

Except for the cutting of corn for the silo and the shredding of corn stover there is little or no advantage to be gained by cutting or grinding roughage. Larger amounts of the coarser parts of some roughages may be eaten when ground but the feeding value of such parts is low and the digestibility is not increased by cutting or grinding.

At the Ohio Station Hayden and his associates found that there was an average gain of 3.1 per cent in milk when comparing whole alfalfa and cut stover to ground alfalfa and ground stover. They conclude, however, that the small difference fell within the limits of experimental error. They also noted that some cows produced more when receiving unground roughage. This is in general agreement with findings at other stations. The Pennsylvania Station found that grinding reduced digestibility.

Investigations at the Ohio Station show that there is no advantage in mixing grains and roughages. The cows receiving the grain and hay (alfalfa, clover, and timothy) mixed, ate more grain and hay but produced no more milk; slightly less, in fact. In this experiment, it was also noted that grinding of roughage caused cows to go off feed and lose weight.

From the standpoint of balancing the ration the grinding of grain and roughage together is certainly to be condemned, as the amount of grain consumed then depends on the capacity of the cow for rough feed. Thus some cows in low production might be receiving the most grain.

Molasses a Cheap Feed

Cane molasses is a good feed for livestock, and is this year the cheapest feed on the market, says Professor E. S. Savage of the New York state college of agriculture.

Molasses is hard to distribute, he says, but it is planned to have it widely available in drums this winter. Reports from a hurried study of the New York milk shed indicate that retail prices for molasses in drums may be from \$21 to \$26 a ton.

He points out that cane molasses is about one-fourth water and has in it more than 56 per cent of total digestible nutrients. The principal constituent is about 55 per cent total sugars, which give molasses its feed value. A ton of molasses, or 171 gallons, has about three-fourths the value of corn when properly used in the ration.

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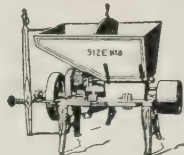
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Poultry Feeds and Feeding

Vitamin A in Corn Gluten Meal

The department of poultry husbandry at Cornell University has made a study of the vitamin A requirement of the chick during early life, a study supported by a temporary fellowship established by the Corn Products Sales Co.

The conclusions of Ringrose and Norris are:

The minimum vitamin A requirement of the chick during the first eight weeks of life was found to be about 150 U. S. P. X. Revised 1934 units per 100 grams of feed.

The biological method for assaying feeds for vitamin A content developed showed that a composite sample of yellow corn contained 7 units of vitamin A per gram.

The vitamin A content of corn gluten meal was found to vary from 7 to 25 units per gram.

An Unknown Factor Needed for Hatchability

At Beltsville, Md., H. W. Titus and others found that a basal feed mixture composed of 52.6 per cent of ground yellow corn, 25.8 per cent of pure wheat bran, 15.8 per cent of rolled oats, and 5.8 per cent of alfalfa leaf meal contained at least enough vitamin G to meet the minimum requirements of chickens for hatchability.

However, the ration lacked some other factor necessary for high hatchability which was relatively abundant in dried pork liver meal and green grass, and present to some extent in a mixture of desiccated meat meal, N. A. fish meal, and dried buttermilk.

Dried whey apparently was not a good source of the factor, as no material increase in hatchability resulted from its addition to the two types of diets studied.

Nutritional Deficiency Diseases of Poultry

As the Maine Station points out, "deficiency diseases, especially those caused by the lack of vitamins or minerals, have come to be recognized as universal problems of both animal and human nutrition." Striking examples of such troubles are rickets, due to vitamin D deficiency, and goiter, due to deficiency of iodine. Considering the question of nutritional deficiency diseases of poultry with reference particularly to use of Maine fishery products as possible correctives of certain of the troubles and the processing of the products with this purpose in view, the Maine Station says:

Maine white fish, herring, and sardine meal were found, by tests on chicks, to contain vitamin D—the factor which stimulates growth, deposits bone ash and bone fat, and decreases the amount of food energy required for growth. * * * Rapid fire-dried sardine meal contained vitamin D at a protective level when fresh. Eight months' storage reduced the potency extremely. On the other hand, vacuum dried sardine, herring, and white fish meal retained vitamin D potency after 1 or 2 years' storage. Of the * * * vacuum-dried sardine meal (tested) the sample containing the highest percentage of fat (16.82 per cent of ether and alcohol extract) was the most potent in vitamin D.

The station also found evidence that the Maine fishery products not only contain vitamins A, D, and G for the prevention of infections, rickets, and pellagra but essential mineral constituents, such as iodine necessary for relief of goiter, big neck, and hairlessness; iron and copper for prevention of

nutritional anemia; calcium and phosphorus for bone growth, muscular development, milk secretion, and reproduction; and various others in less amounts, but that only thru proper processing may these factors be preserved in the final product.

Feed Men Cannot Advise on Poultry Remedies

In California the state law restricts the retail sale of various drugs and remedies.

I. J. Strommes, sec'y of the California Hay, Grain & Feed Dealers Ass'n, in a recent circular says:

Recently the Pharmacy Board tightened up on retail sale of various drugs and medicines including some common livestock necessities. Most economic poisons must now be resold in unopened, sealed, original containers. Not only are the veterinarians restricting the use of vaccines and serums, but also practically all customary disease prevention work. Some restrictions are in order.

After talking with several Los Angeles feed men, President Roby believes there would not be much complaint if there were enough veterinarians in each and every district to properly do the work when the poultrymen needed help. He says most poultrymen are able to vaccinate their own flocks for pox and dealers are practically agreed that no one but a veterinary should do blood testing or vaccinate for laryngotracheitis.

We believe that under these regulations an unlicensed person (feed dealer) cannot even advise on the need or use of any drug or medicine for the treatment of any lower animal, including poultry. Only veterinarians, pharmacists, or medicos, can so do if these rules are fully enforced. Special or regulatory mashers might be questioned; and certainly most disease prevention work as now done by field men, university or extension specialists. We heard that one man has been arrested and fined. He operated independently as a field man.

We hope there will not result indiscriminate arrests and prosecutions over the state until the Veterinary Board confers and outlines legitimate practices. We hope the Board will

sympathetically consider the ordinary services arising daily in our relation with the livestock industry, and particularly with the poultry customer, concerning sanitation, culling, reducing mortality, and disease prevention work—all preventive measures rather than actual disease treatment.

Menhaden Oils for Poultry

The Maryland Station in co-operation with the U. S. Bureau of Fisheries conducted a study to determine the value of menhaden oils as a source of vitamin D for use in poultry feeding.

Four samples of menhaden oil were tested at levels of 0.5, 1, and 1.5 per cent. Normal bone ash averages were obtained with three of the samples at lowest level, while the fourth gave a slightly subnormal content at the 0.5-per cent level. Subsequently three other

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samples were tested at 0.25-, 0.5-, and 1-per cent levels, a fourth sample at 0.25- and 0.5-per cent levels, and a fifth at 0.5- and 1-per cent levels.

All of these samples were sufficiently rich in vitamin D to provide for normal calcification at the lowest level tested. The average potency of various brands of cod-liver oils used in poultry feeding was adequate to produce normal calcification by the method used at from 0.25- to 0.5-per cent levels. There was considerable variation in the vitamin D potency of the oils carrying this factor. There were also indications that menhaden oils of higher quality could be produced by modifications of the method of refining.

Cheaper Turkey Rations

Experiments are being made at the poultry division of the University of California at Davis, Cal., to find out the amounts of vitamins and proteins required by turkeys.

Professor Thomas H. Jukes of the poultry division says that information is badly needed as to what extent the more expensive turkey feeds, such as milk, wheat bran and yellow corn, can be replaced by cheaper feeds, such as greens, alfalfa meal, molasses, rice bran, barley and milo. There are two ways of obtaining such information. The first way is to make up cheap rations and compare the results with those obtained on more expensive feeds. Such an experiment is now under way, and it is hoped to report the results next spring. The second way is to study the fundamental nutritional requirements of turkeys. This is a slow task, but yields very definite results when it is completed. The more thorough knowledge of the nutritional needs of turkeys, the easier it will be to formulate satisfactory rations. Work is now in progress on the requirements of turkeys for the two factors formerly grouped together as "vitamin G".

It has been shown at Davis that turkeys need both these new vitamins. Lack of the first, called "lactoflavin", results in slow growth and produces acute "dermatitis" in poults. The symptoms are a sore and encrusted mouth, stuck eyelids, ragged feathers, and a sore, caked vent. This is another instance of a difference between turkeys and chicks, because chicks on a diet deficient in lactoflavin grow slowly without dermatitis. Lack of the second vitamin, called the "filtrate factor", results in slow growth and high mortality in poults. The quantitative requirements of poults for the two vitamins are now being worked out.

In 1935 three groups of Bronze Poults were fed different levels of protein to compare the effects on growth and cost of gain. 33 poults were used in each group. The same all-mash rations without extra supplements were fed from hatching to 24 weeks of age. Group 1 received a ration containing 15 per cent of protein; Group 2, 20 per cent; and Group 3, 25 per cent. The protein level was varied by altering the percentages of sardine meal and ground barley. The other constituents of the ration were the same as in the mash used for starting the poults in the University breeding flock.

It may seem that Group 1 grew more slowly than Groups 2 and 3 throughout the entire experiment. Group 3 grew more rapidly at first than Group 2, but the difference was not maintained. From 6 to 10 weeks of age, Groups 2 and 3 grew at the same rate. After this, Group 2 began to grow more rapidly than group 3, until at 22 weeks of age, group 2 were heavier in average weight than group 3, and finished heavier than group 3.

The feed cost per pound of gain showed that 25 per cent protein produced the most economical gains for the first 6 or 8 weeks. After this, 20 per cent protein gave decidedly more economical gains until marketing time, and produced a better finish. Group 1, on

15 per cent protein, made a very slow start and remained behind the other two groups throughout the experiment. Perhaps Group 1 would have made more economical gains on the 15 per cent ration when they were older if they had received a higher level at the start. It is hoped to settle this point in 1936.

It should never be forgotten that a turkey which is being "fattened" for the Thanksgiving or Christmas market, is in reality *growing* rather than becoming fat. A growing turkey needs, in addition to grain, ample quantities of a mash which will supply proteins, vitamins and minerals, which are essential for the formation of flesh and bone.

Potatoes for Chickens

By D. C. KENNARD of Ohio Agricultural Experiment Station

When unmarketable potatoes are available, they can be used to advantage for poultry feeding, either for fattening poultry or for egg production.

Potatoes should not be regarded as a succulent feed or as a green feed even though they contain approximately 80 per cent of water. They must be cooked before feeding and simply serve as a partial substitute for grain. Their value becomes apparent when the solids or dry matter content of corn and wheat is directly compared with that of potatoes with a similar moisture content.

In other words, if 70 per cent of the water is removed from potatoes, the composition of the remaining residue becomes practically the same as that of corn and wheat insofar as protein, carbohydrates, and digestible nutrients are concerned.

Boiled or steamed potatoes make a palatable supplement to any ration for poultry either for fattening, growth, or egg production. Raw potatoes are comparatively indigestible, unpalatable, and not suitable for poultry feeding.

Boiled or steamed potatoes are especially desirable to use as a part of a moist mash because of the palatability they add to the feed mixture.

The daily feeding of a moist, warm, potato-mash-cod-liver oil mixture is one of the most effective procedures for securing the extra feed consumption necessary for maintenance of winter egg production. Furthermore, the daily feeding of a moist mash permits the administering of fresh cod-liver oil or other vitamin A and D concentrates in accordance with the special winter requirements of these vital factors.

Chickens can hardly overeat of a wet mash composed of a large proportion of boiled potatoes; whereas ill effects of overeating may often be experienced with more concentrated moist feed mixtures. Hence, when boiled potatoes constitute one-half or more of the moist mash by weight, they may be regarded as a safety factor.

That 4 to 5 pounds of raw potatoes when

cooked have an equal feeding value to 1 pound of grain is substantiated by the actual dry matter content of potatoes as well as by feeding tests with poultry.

Ordinary Ration Contains Enough Iodine

Minnesota is in a goiter producing area where addition of iodine to poultry feed might be expected to be helpful, but the Minnesota Experiment Station began a test Oct. 15, 1934, on 140 white leghorn pullets fed no oyster shell but one per cent of cod liver oil added to the mash.

Potassium iodide was supplied to lot 5 at the rate of 3 oz. K I per ton of mash, to lot 6 4 mg. per hen daily, and to lot 7 none.

All eggs were weighed and their quality tested during the 6½ months of the test.

It was concluded that the iodine supplement had no effect, beneficial or otherwise, on egg size and quality. This means that an ordinary ration contains enough iodine to meet the hen's requirement. Professor Johnson says "Certainly, if rations not supplemented with oyster shell or cod liver oil contain adequate amounts of iodine, then the usual procedure of including these ingredients in the diet amply insures against a deficiency." "No improvement was found in egg size, percentage of thick albumen, yolk index, yolk weight, shell thickness or yolk color following the addition of iodine to the diet of the hen."

Co-operatives Must Support Their Government

A suit to recover \$60,000 in business taxes paid since May 1, 1935, was brought by the Washington Co-operative Egg & Poultry Ass'n. the Skagit County Dairymen's Ass'n and 15 other co-operatives on the ground that they are not required to support the government as they are non-profit. They argued they were organized as agencies thru which farmers could profit by marketing their products more cheaply, and that under the federal co-operative marketing act are not engaged in an activity by which the tax liability could be imposed.

The Superior Court at Olympia, Wash., Oct. 14, ruled against the co-operatives, sustaining the state's contention that facts presented did not constitute a cause of action.

The Soybean and Its Products was the topic of a paper by Dr. H. W. Lohse, research worker, before the Toronto section of the American Ass'n of Cereal Chemists, in which he outlined the improved methods of making a dis-embittered flour suitable for human consumption and supplying the protein deficiencies of wheat flour.

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CHAPTER III—CONCLUSIONS AND THEIR RELATION TO LAWS OF DYNAMICS

(Continued—2nd part)

(The sections D, E, etc., are conclusions drawn from analysis of the writer's research in packing effect. The appended sections, E', F', etc., are merely discussions intended to clarify the relation of these proved facts to the known physical laws.)

D.—Definite relationships exist between the various combinations of factors and the various rates of packing effect which they cause. These relationships can be accurately determined by conducting studies similar to those reviewed in Chapter II.

E.—The rate of P. E. in any grain in a shallow bin and the rate of P. E. in the same grain of the same T. W. (test weight), in a deeper bin of the same shape, cross-sectional area and material of construction vary directly—but not according to the straight line law—with variations in the depths of the bins.

E'—Variations in the rates of P. E. in bins of different depths are caused directly by variations in the two major factors, impact and pressures. The velocity of any falling body, dropped in space from a static condition, tends to increase as the square root of the height from which it is dropped, until a point is reached at which the frictional resistance of the atmosphere through which it is falling exactly equals the gravitational force. The force of impact of a mass of grain striking the bottom of a shallow bin is less than that in a deeper bin, and increases in direct proportion to the increase in depth of the bin, up to a point where the maximum velocity of the mass of falling grain is attained. As the bin is filled, succeeding quantities of grain fall from a less height, but the total force of all the impacts of the entire mass of grain is greater in any deep bin than in any shallower bin. Where the stream of grain has attained some velocity before being discharged into the bin, its maximum velocity is attained in a shorter drop and the force of impact from that point downward will be constant, but even in this case the total of maximum impacts will be greater in a deep bin than in a shallow bin.

Vertical and lateral pressures at any level in a bin of grain (both of which tend to compress the mass of grain) *vary directly*—but not to a straight line relation—with the height of grain standing above the given level. Janssen's formula,¹⁶

$$V = \frac{R \times W}{k \times u} \left(1 - \frac{1}{e^{\frac{H}{D}}} \right)$$

provides a direct method of determining these pressures at any level in any grain in any bin. W. J. Larkin, Jr., in "Notes on Grain Pressures in Storage Bins," USD of A. Bull. No. 789, 1919, provides a table which facilitates the determination of these pressures when constant values are accepted for u , k and W . This table shows that as the ratio of the height of grain to the diameter of the bin increases, the ratio of the vertical pressure to the diameter, and the ratio of the lateral pressure to the diameter increase in direct proportion—but not to a straight

line. It is true that as $\frac{H}{D}$ approaches 3.0, and

especially after $\frac{H}{D}$ exceeds 4.0, the increases in

the unit pressures are slight, but it is also true

that in the majority of grain bins — is less than

4.0, and even in bins in which $\frac{H}{D}$ equals 10.0,

the increase is still directly proportional. In the upper portions of a deep bin the unit pressures are no greater than in similar portions of a shallow bin, but the total force exerted by the vertical and lateral pressures throughout the bin is proportionately greater.

F.—The rate of P. E. in any grain in a small bin and the rate of P. E. in the same grain of the same T. W. in a larger bin of any shape, but of the same depth and of the same material of construction, vary directly; but not according to the straight line law with variations in the hydraulic radii of the bins involved.

F'—Variations in the rates of P. E. in bins of different sizes and shapes are caused by variations in the one major factor, pressures, which in turn are caused by variations in one of the components of this factor, namely, the diameter of the bins. As Janssen's formula can be accepted as a general one, applying to all forms of bins, and as one of its component factors is the hydraulic radius of the bin, then, when all other factors remain constant, the unit pressures in any bin are in direct proportion to the hydraulic radii of the bins. In circular or square bins, or bins in the form of any regular polygon, the hydraulic radius is equal to one-fourth of the diameter of the bin or of the inscribed circle, and in interstices or other irregular bins the hydraulic radius is equal to the area divided by the perimeter. Therefore the hydraulic radius of any bin multiplied by four will give a value equal to the diameter of the equivalent circular bin, and the unit pressures can be determined from Larkin's table. As these pressures are given in

terms of $\frac{V}{D}$ and $\frac{L}{D}$, it can be readily seen that

any increase in D will result in a proportionate increase in the total vertical pressure and the total lateral pressure, in pounds per square foot, at any level.

G.—The rate of P. E. in any grain in a bin constructed of one material and the rate of P. E. in the same grain of the same T. W. in a bin of the same shape, cross-sectional area and depth, but constructed of a different material, vary directly according to the straight line law, with variations in the "compensated diameters" of the bins involved.

G'—Variations in the rates of P. E. in bins constructed of different materials are caused by variations in the one major factor, pressures, which in turn are caused by two of the components of this factor, namely, the coefficient of friction of the grain on the bin walls and the ratio of the lateral to the vertical pressures. As one of the component factors of Janssen's formula is

the ratio $\frac{R}{k \times u}$ or, since $R = \frac{D}{4 \times k \times u}$, then it follows that when all other factors re-

16. In Janssen's formula, R represents the hydraulic radius of bin; D =diameter of bin (or inscribed circle), in feet; H =height, in feet, of grain above point in question; e =base of Napierian logarithms; u =coefficient of friction of grain on bin walls; W =weight of grain in pounds per cubic foot; V =vertical pressure of grain, at depth H , in pounds per square foot; L =lateral pressure; and k =ratio of lateral to vertical pressure.

17. Compensated Diameter of a bin, D' in Janssen's formula, is its diameter, in feet, divided by the product $4 \times k \times u$.

main constant, the unit pressures in bins constructed of different materials are in direct pro-

portion to the values for the term $\frac{1}{4 \times k \times u}$,

in the bins. In Larkin's table, unit pressures were derived by accepting a value of 0.6 for k and of 0.4167 for u . Under these conditions the product $4 \times k \times u$ became equal to 1.0, which simplified the whole formula to:

$$V = D \times W \left(1 - \frac{1}{e^{\frac{H}{D}}} \right)$$

Experiments have shown, however, that values for k and u vary in bins constructed of different materials, and have provided values for these factors in bins of various materials of construction. Larkin's table can be used to determine unit pressures in bins constructed of these various materials, for which the values of k and u are known, by computing a compensated value for D , which is termed D' , in this manner: When $4 \times k \times u = N$, (not equal to 1.0) then Janssen's formula becomes:

$$V = \frac{D}{N} \times W \left(1 - \frac{1}{e^{\frac{H}{\frac{D}{N}}}} \right)$$

Let $\frac{D}{N} = D'$, then

$$V = D' \times W \left(1 - \frac{1}{e^{\frac{H}{D'}}} \right) \text{ or}$$

$$\frac{V}{D'} = W \left(1 - \frac{1}{e^{\frac{H}{D'}}} \right)$$

For example, let $D = 10.2'$; $k = 0.4$; $u = 0.375$; then, $D' = \frac{D}{N} = \frac{10.2}{4 \times 0.4 \times 0.375} =$

$\frac{10.2}{0.6} = 17'$. As the unit pressures are given in

terms of $\frac{V}{D}$ and $\frac{L}{D}$, it can be readily seen that

any increase in D' will result in a proportionate increase in the total vertical pressure and the total lateral pressure, in pounds per square foot, at any level in the bin.

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American People Misled by Demagogos

[From address by BEN E. CLEMENT, Leon Junction, Tex., before Grain and Feed Dealers National Ass'n at Milwaukee.]

Business men who are wise enough stick to principles that are known to be sound, sane, safe, dependable. They succeed and are known thruout their careers as conservative businessmen. They take the course that has proven sound and correct.

Webster's definition of an experiment: "It is an act or operation undertaken in order to discover some unknown principle or effect." To call acts of our government, during the past several years, experiments is a misnomer—which is the word or designation that I use to be parliamentary. Under the new dispensation we repeat the age old follies and appropriate ancient fallacies and call them experiments.

Under them all the wisdom gained by human experience has been junked; economic law is no longer a truth, a principle, a thing to be heeded, obeyed, conformed to. Those who subscribe to the theory that economic law is man made law have set up destruction in the place of production as the law of the creative power of wealth. All economic law is in reverse. Under it we try to buy prosperity while all human experience teaches us that we have to work for it. We spend a million dollars to save a nebulous ten million. We destroy wealth to increase and insure our fortunes. We tear down to build up. Under the newly interpreted economic law, metaphorically speaking, to climb out of a hole, we go down the ladder.

There now exists a sinister and devastating scheme—the use of the taxing power to redistribute the wealth—a popular fallacy prevalent today because we have departed from the democratic principle of government that no tax shall be levied in excess of amount needed economically to administer the government. It leads to the condition that confronts this country today. A condition where the politician recognizing no limitations imposed by the organic law of the nation, seeks thru demagoguery to create in the minds of first one class and then another the conviction that it is the duty of, and that the government has the right and power, by the exercise of the taxing power to take money from corporations, industry, and individuals to give to one group or another for purposes of social security and class ascendancy.

This species of hypocritical appeal has already created, or is about to create, seven distinct classes or groups intended to rest supinely upon the backs of the taxpayers of this country, namely: those co-operatives who already have their arms, shoulder-deep in the United States Treasury; the farmer in whom there has been inculcated the spirit of class consciousness and class dependence necessary to be sustained by processing taxes first, and now by appropriations from the Treasury to give him bribes, benefits, subsidies and to provide loans for the purpose of enabling him to speculate for an advance in the value of his products with the assurance that the farmer gets the advance and the American people take the loss if any; the old age class who is to get the pension because they took no thought of tomorrow, and either squandered their substance or were too trifling to acquire any; the employed who after years of service are to be retired on a pension; the unemployed who have lost their jobs because of changing economic conditions and other causes, the unemployables because of their physical, mental or health deficiencies, and last but not least the youth of the land who under the proposed child labor amendment to the Constitution will be deprived even of the right to work and forced to go to school until 18 years of age, which means at least partial government support.

The Farm Board.—For more than fifteen years starting with the United States Grain Growers, Incorporated, the politicians have been conniving with a selfish designing group of so-called farm leaders to put co-ops in business in competition with private enterprise by generous financing thru the United States Treasury, resulting in the loss of 360 millions of dollars of the American people's money thru the Farm Board, and this group of conspirators who still continue to operate on government money, while the Department of Agriculture broadening its activities, slightly deviating from Farm Board antics, has expanded government operations in farm products even beyond the wildest dreams of the bureaucrats or the comprehension of the American public.

And today we have a Commission in Europe studying co-operative systems with the avowed purpose of starting consumer co-operatives in this country. I take the position that the American people, or any group thereof, have the right and power to engage in any system of business, conceived, dedicated and employed to serve them and the only concern of the government is or should be to prevent monopoly, and hold even and exact the scales of justice, performing the function of umpire but never a direct or indirect participant in the game.

To tax American people for any other purpose than to maintain a government of law in accordance with the express terms, and limitations, of the Constitution is subversion and can have but one result and that is the inevitable ruin of the American system.

No man with one iota of sense would propose to saddle the people of a nation with the stupendous tax burden necessary to be assessed to defray the expenses superimposed by laws creating the vast burdens contemplated by these wild schemes.

In the tragical times through which we have been passing in recent years, the masses have been influenced by demagogues to loose thinking. At a time when the nation should have been tightening its belt to the last notch and refused to be stampeded they had preached to them so much economic heresy, so much political apostacy that they lost their poise and are about to become the victims of the most monumental tragedy the world has ever witnessed.

Economic disturbance requires courage and faith, industry and thrift; and above all things, peace and order are required for the solution of its problems and the overcoming of its difficulties. The same high order of patriotism characterizing the nation during times of war should obtain during times of economic stress. Public men and private citizens should eschew all economic vagaries and dedicate the best that is in them to the patient, courageous discharge of every duty to their country and their fellow citizens. Times of stress have always been times of trial unfortunately multiplied in intensity and increased in duration by demagogues, doctrinaires and their visionary cure-alls.

Distributing the wealth of the nation thru taxation would entail the wrecking of the nation; if pure demagoguery, it is an infamous piece of hypocrisy.

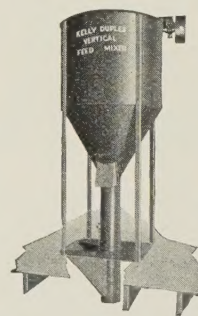
Under a glorious system of free government, which let us pledge ourselves and our country never to permit to perish, let us continue to enjoy under, by and thru the Constitution the

precious heritage bequeathed us, and by toil, and thrift, enterprise, industry and self-reliance continue to typify those high qualities of rugged individualism which have enabled this country to surpass the world both in individual and collective accomplishment and universal enjoyment, placing all our reliance in the freedom we enjoy and our capacity for initiative and enterprise which thru generation after generation has wrought this miracle of America.

General Mills and its 14 subsidiaries announced recently that processing taxes not paid to the government would be returned to customers at the rate of \$1 per barrel of flour bought on written contract.

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Calcium, carbonate, phosphate	Mineral Mixtures
Cocaoat oil meal	Molasses
Cod liver oil	Oyster shell, crushed
Charcoal	Peanut meal
Commercial feeds	Peat moss
Corn germ meal	Phosphates, rock
Cottonseed meal, cake	Potassium iodide
Dog food	Poultry grits
Feed mixers	Rabbit feed
Feed concentrates	Salt
Percentage feeders	Sardine oil
Fish meal	Screenings
Formulas	Sesame meal
Gluten, feed, meal	Skim milk, dried
Hammer mills	Soybean, meal
Iodine	Tankage
	Vegetable oil
	Yeast for feeding

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Harvesting Soybeans in Illinois

The 1936 soybean harvest has begun in Illinois, the leading producing state.

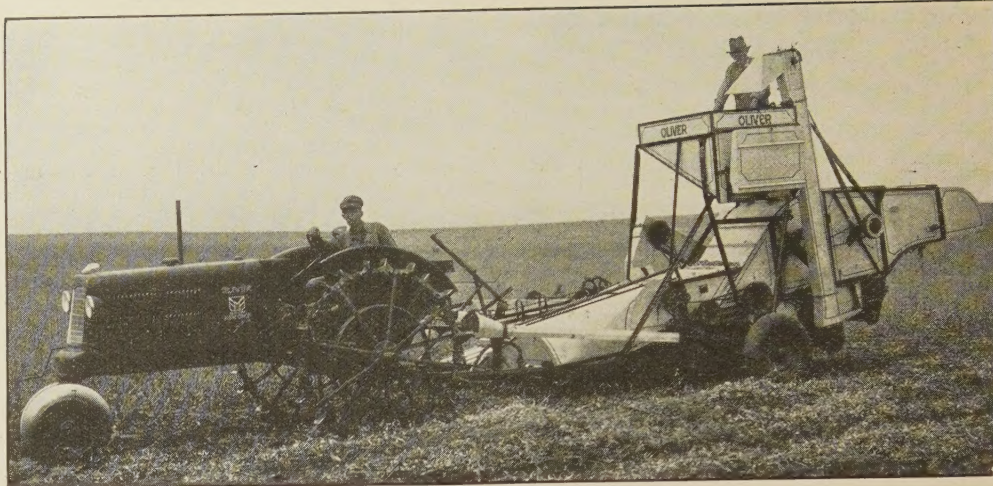
In the engraving herewith are shown a tractor and small combine on the farm of Robert Whiter, six miles west of Champaign, Ill., where despite the drouth important shipments of soybeans to the Chicago market are expected. Illinois is expected to harvest about 18,000,000 bus.

Instead of cutting and binding the soybean plants to be subsequently threshed in the barnyard the combine reaps and threshes at the same time, the beans being elevated into a hopper while the foliage is left on the field.

About ten of the manufacturers of harvesting machines are now building these small combines. A combine will harvest two acres of soybeans in an hour. Two men on the machine reduce the man labor requirement from 5 hours an acre to one hour an acre.

The combine is really a threshing machine with a header attached to cut the grain and deliver it to the cylinder of the thresher. The first machine was brought into the state of Illinois by Garwood Bros., of Stonington in 1924.

The loss of beans in combining is only 10 per cent, compared with 15 to 50 per cent by other harvesting methods, and the combined beans are hauled to the grain dealer in as good condition as the shock threshed beans.



Harvesting Soybeans with a Combine.

Soybean for Plastics

By W. L. BURLISON, University of Illinois

During the last six years there has been a dramatic rise of a new industry—plastics—which gives promise of absorbing soybean products in increasing amounts. It is said that the total value of plastics sold to the consumer in 1935 amounted to approximately 200 million dollars. This development seems like a modern miracle. Plastics are found in furniture, wall panels, builders' hardware, electric fixtures, ash trays, clocks, toilet articles, decorative stair fronts, automobile parts, light switches, distributor cases, window frames, safety glass, buttons, buckles, costume jewelry for clothing, and literally hundreds of other little gadgets. This list is growing month by month.

The soybean is proving to be an excellent source of raw material for the plastic industry. From a ton of soybeans are produced about 250 pounds of oil, and 1600 pounds of meal containing approximately 40 percent protein. Last year America produced about 40,000,000 bushels of soybeans. If 40 percent of this is protein, it is evident that the soybean is an extensive source of plastic material. One automobile company is reported to be constructing a plant for plastic manufacture costing \$5,000,000.

Soybean Processors Meet

The National Soybean Processors Ass'n met recently at Chicago and heard talks by Dr. O. E. May, director, Regional Soybean Industrial Products Laboratory, at Urbana, Ill., Dr. W. L. Burlison, head, Department of Agronomy, University of Illinois, and J. E. Barr, Marketing Specialist of the Bureau of Agricultural Economics, U. S. Dept. of Agriculture.

Dr. May told in some detail the progress being made by the laboratory which has had the utmost co-operation of trade and agricultural groups and which gives high promise of accomplishing very beneficial results.

Pres. I. C. Bradley declared this had been an epochal year in the history of the soybean industry and praised the co-operation obtained from various government experts in the field of soybeans.

Other speakers, including J. J. Vollersten of the American Oil Chemists Society, H. W. Irwin and Guy Fox discussed the soybean oil situation, giving particular attention to research work now under way in the edible oil division.

Mr. Bradley, Taylorville, Ill., nationally known soybean expert, was re-elected pres.; W. L. Shellabarger of Decatur, Ill., vice pres.; H. R. Schultz, Centerville, Ia., sec'y; John H. Caldwell, St. Louis, Mo., treas.

A meeting of the soybean com'tee of the Farm Chemurgic Council was held after the regular session.

Raw and Cooked Soybeans for Pigs

In a fattening test with three groups of 6 pigs each, steamed potatoes were fed as a basal ration to all groups, with a supply of barley, meat meal, fish meal and CaCO₃ fed to the check group. In the ration of the test group, the same food was given except that a portion of the barley and fish meal was replaced by soybeans, fed raw to one group and as cooked beans to another. German soybeans not deprived of their fat proved to be a good and beneficial food.

In order to obtain favorable gains in weight, the German experimenters V. Horn and E. Muhl, found the content in animal protein in the ration should not be reduced too much by the substitution of soybeans. If the biological values of the proteins of the different rations were the same, soybeans effected nearly equal gains of weight as did a stronger fish-meal feeding.

Soybean feeding was found to be economical. The gains in weight were somewhat more favorable with cooked than with raw soybeans. It is questioned if these higher gains are compensated by the greater labor and cost of cooking the beans. If but 200 g. of soybeans is given per day per animal, the

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quality of the meat and lard was unobjectionable. It is shown that if samples of lard are to be taken for comparative trials, it should always be taken from the same part of the body.

Food and Industrial Prospects for Soybeans

Excerpts from the address of L. B. Breedlove before the Soybean Conference at the Grain & Feed Dealers National Ass'n convention.

It seems to me that now is the time for research organizations to prepare more information for public consumption on the food uses of the soybean. The published information is too much devoted to growers' problems and to the special problems which interest the technicians.

Most of the foods consumed by Americans are low in minerals and in vitamins. Such foods furnish around 78 per cent of the average American's intake of 3,000 calories per day, leaving less than 30 per cent to be supplied by the so-called protective foods. Sherman, as you probably know, states that at least one-half of our caloric intake should consist of protective foods.

As compared with about 30 other commonly used foods (cereals and cereal products, legumes, green vegetables, potatoes, fruits, milk, butter, eggs, cheese, sugar, lard, meats and nuts) soybean flour is richer in protein as well as minerals. It is richer in fat than any of these foods except cheese, nuts, smoked ham, butter and lard, and is also richer in vitamins. At prevailing prices, corn meal, potatoes and cabbage are the only foods cheaper than soybean flour.

There are several reasons why the soybean should increase in popularity in the human diet. These are: the excellent nutritional qualities which exceed that of any other food; the versatility of the foods which can be made from the beans; and, the economy of the soya foods as compared to all others. It seems to me that it is not necessary to indulge in meaty scientific presentations to bring the food merits of the soybean home to the American people. I have recently found that some of my simple statements of Chinese experience have attracted a large number of people. The fact that Chinese babies are hardly ever fed with mother's milk but with soya milk and thrive better than milk fed children and that Chinese soldiers on a strict soybean diet have exhibited more endurance and less illness than have the soldiers of western nations are samples of the statements which attract people.

The present industrial requirement for soybeans is in the neighborhood of 10,000,000 bus. per year. Unless export trade can be considerably expanded and present prospects indicate that it can be, tho this will hinge on the continuance of a disturbed situation in Manchuria, our production is likely to outrun our industrial demand. Japanese penetration into China—a war time invasion labelled by the ever explaining diplomats as something else—will continue but my opinion, based on observation of the race and also on advice of correspondents is that the Japanese will expand the cultivation of soybeans in the “taken” territory.

Soybean oil is not a perfect oil for paint making, for it resists all efforts to make it dry satisfactorily. But used in conjunction with many supporting oils and materials to fortify or modify it, soya oil fills an important place in the paint industry. Altho many speakers do not seem to realize the limitations, soybean oil has limitations in the paint industry and while the present use will be greatly expanded with better knowledge of the qualities of the oil, I am of the opinion that the consumption of soya oil in the paint industry will not reach the proportions expected by many.

The field of greatest expansion, outside of food uses, will be in the use of soybean meal for plastics. True soybean plastics now exhibit the crazy quilt of shades and color just

as did the original plastics of 20 years ago. There are many phases of the separation of the protein from the soluble carbohydrates in the meal yet to be worked out before the soya plastics can be put to their full commercial uses.

The casein from soybean milk can, in the opinion of competent chemists, be used in the production of synthetic wool. Probably for large scale production soybean casein has many advantages over the use of casein from milk. The wool plant in Italy that is making synthetic wool from coagulated skimmed milk, is using rayon manufacturing equipment made in this country, and the changes in the process, as far as I can learn, are very meagre. The production of synthetic wool from soya milk would require the beans grown on about 15,000,000 acres.

Morrison Re-Elected by Nebraska Farmers

The 34th annual convention of the Farmers Elevator Ass'n of Nebraska, meeting at Omaha, Oct. 22, re-elected J. R. Morrison, Chappel, pres. for the 7th time.

Cleon Dech, Silver Creek, was made vice-pres. to succeed E. P. Hubbard, Juniata. Frank Rutherford, Omaha, was re-named sec'y. The selection was made by the board of directors, under an amendment to the by-laws, whereby the directors were elected by districts.

Directors elected were: District 1, C. W. Howard, Benedict; District 2, Charles N. Schupbach, Wilber; District 3, W. M. Burr, Juniata; District 4, Cleon Dech, and District 5, J. R. Morrison.

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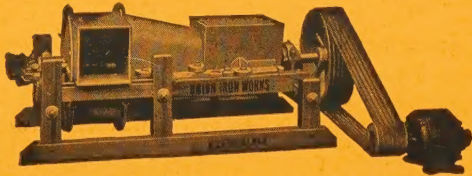
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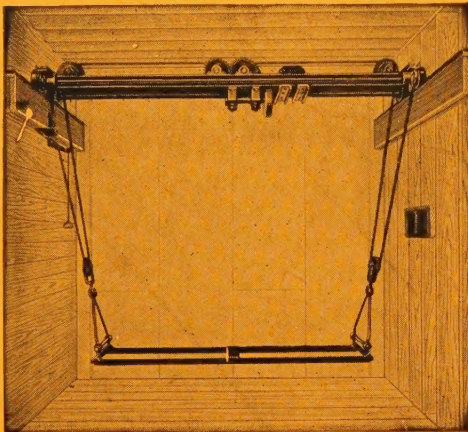
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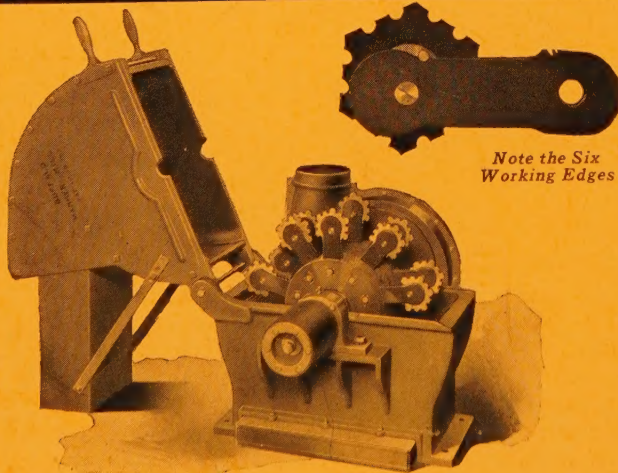
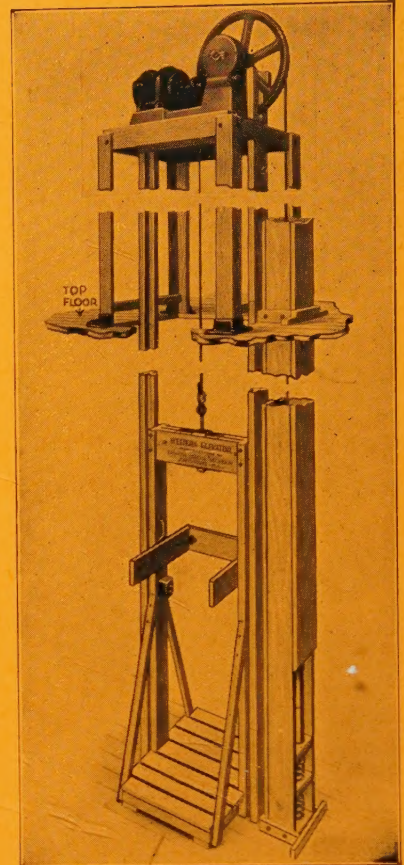
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